CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION
ALAMEDA COUNTYWIDE NPDES MUNICIPAL STORMWATER PERMIT

ORDER R2-2003-0021
NPDES PERMIT NO. CAS0029831

FOR THE CITIES OF ALAMEDA, ALBANY, BERKELEY, DUBLIN, EMERYVILLE, FREMONT, HAYWARD, LIVERMORE, NEWARK, OAKLAND, PIEDMONT, PLEASANTON, SAN LEANDRO, UNION CITY, ALAMEDA COUNTY (UNINCORPORATED AREA), THE ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, AND ZONE 7 OF THE ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, WHICH HAVE JOINED TOGETHER TO FORM THE ALAMEDA COUNTYWIDE CLEAN WATER PROGRAM.

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REISSUING WASTE DISCHARGE REQUIREMENTS FOR:

THE CITIES OF ALAMEDA, ALBANY, BERKELEY, DUBLIN, EMERYVILLE, FREMONT, HAYWARD, LIVERMORE, NEWARK, OAKLAND, PIEDMONT, PLEASANTON, SAN LEANDRO, UNION CITY, ALAMEDA COUNTY (UNINCORPORATED AREA), THE ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, AND ZONE 7 OF THE ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, WHICH HAVE JOINED TOGETHER TO FORM THE ALAMEDA COUNTYWIDE CLEAN WATER PROGRAM

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter referred to as the Regional Board) finds that:

FINDINGS

Finding 1: Incorporation of Fact Sheet

1. The Fact Sheet for the Alameda Countywide Clean Water Program NPDES Permit Reissuance includes cited references and additional explanatory information in support of the requirements of this Permit. This information, including any supplements thereto, and any future response to comments on the Revised Tentative Order, is hereby incorporated by reference.

Findings 2-3: Existing Permit

2. The Cities of Alameda, Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Newark, Oakland, Piedmont, Pleasanton, San Leandro, Union City, Alameda County (Unincorporated area), the Alameda County Flood Control and Water Conservation District, and Zone 7 of the Alameda County Flood Control and Water Conservation District (hereinafter collectively referred to as the Permittees and individually as the Permittee) have joined together to form the Alameda Countywide Clean Water Program (hereinafter referred to as the Program).

3. The Permittees are currently subject to National Pollutant Discharge Elimination System (NPDES) Permit No. CAS0029831 issued by Order No. 97-030 on February 19, 1997, and modified by Order No. 99-049 on July 21, 1999.

Findings 4-5: Permit Coverage

4. The Permittees each have jurisdiction over and/or maintenance responsibility for their respective municipal separate storm drain systems and/or watercourses in Alameda County. (See Attachment C: Municipalities and Major Open Creeks and Waterbodies in Alameda County)

5. Federal, state or regional entities within the Permittees' boundaries, not currently named in this Order, operate storm drain facilities and/or discharge stormwater to the storm drains and watercourses covered by this Order. The Permittees may lack jurisdiction over these entities. Consequently, the Regional Board recognizes that the Permittees should not be held responsible for such facilities and/or discharges. The Regional Board will consider such facilities for coverage in 2003 under its NPDES permitting scheme pursuant to United States Environmental Protection Agency (US EPA) Phase II stormwater regulations. Under Phase II, the Regional

Board intends to permit these federal, state, and regional entities either directly, or potentially through use of a Statewide Phase II NPDES General Permit.

Findings 6-8: Permit Background

6. On August 6, 2001, the Permittees and the Program submitted a permit re-application package that included a completed Application/Report of Waste Discharge for reissuance of waste discharge requirements under the NPDES permit referenced in Finding 3 (hereinafter referred to as the Permit) to discharge stormwater runoff from storm drains and watercourses under the Permittees' jurisdictions.

7. The application requirements that the Regional Board has determined to be applicable to the Permittees include submittal of a proposed Stormwater Quality Management Plan to reduce the discharge of pollutants in stormwater to the maximum extent practicable (MEP) and to effectively prohibit non-stormwater discharges into municipal storm drain systems and watercourses within the Permittees' jurisdictions.

8. The application incorporated by reference the Program's 2001-2008 Stormwater Quality Management Plan. The intent of the Stormwater Quality Management Plan is to reduce the discharge of pollutants in stormwater to the maximum extent practicable, and in a manner designed to achieve compliance with water quality standards and objectives, and effectively prohibit non-stormwater discharges into municipal storm drain systems and watercourses within the Permittees' jurisdictions. The Stormwater Quality Management Plan fulfills the Regional Board's permit application requirements, and it will be improved and revised in accordance with the provisions of this Order.

Findings 9-15: Stormwater Quality Management Plan

9. The Stormwater Quality Management Plan describes a framework for management of stormwater discharges during the term of the Permit. The title page and table of contents of the Program's 2001-2008 Stormwater Quality Management Plan (Management Plan) are appended to this Order as Attachment A. The Management Plan describes the Program's goals and objectives and the annual reporting and program evaluation process. Performance Standards, which represent the baseline level of effort required of each of the Permittees, are contained in Section 5 of the Management Plan. The Performance Standards serve as a reference point upon which to base effectiveness evaluations and consideration of opportunities for improving them.

10. The Management Plan, including the Performance Standards, is incorporated in the Permit by reference and enforceable as such, and is considered an enforceable component of this Order.

11. Program activities are focused on the following components:

    - Regulatory Compliance, Planning, Program Management
    - Annual Reporting and Evaluation
    - Watershed Assessment
    - Monitoring and Special Studies
    - Pollutants of Concern
    - Public Information and Participation
    - Municipal Maintenance Activities
    - Illicit Discharge Controls
    - Industrial and Commercial Discharge Controls
    - New Development, Significant Redevelopment, and Construction Controls

12. Through the Public Information and Participation (PIP) component, the Program provides information to residents in order to educate them about stormwater pollution and change behaviors that adversely affect water quality. PIP activities are conducted locally, countywide and in collaboration with other regional agencies. The Management Plan states that, at a minimum, annual PIP efforts must include general outreach, targeted outreach (including outreach to municipal staff within each Permittees' jurisdictions), educational programs, and citizen participation activities. The Management Plan also states that one of the PIP component objectives is to evaluate component effectiveness of the PIP activities and make improvements so as to increase effectiveness.

13. The Management Plan contains Performance Standards and supporting documents to address the post-construction and construction phase impacts of new development and significant redevelopment projects on stormwater quality.

14. The goal of the Industrial and Commercial Discharge Controls component is to reduce or eliminate adverse water quality impacts from activities conducted at any industrial and commercial site within the Permittees' jurisdictions that have a potential for significant urban runoff pollution. The Management Plan requires each Permittee to develop a five-year Illicit Discharge Control Action Plan (Action Plan) to reduce, control and/or otherwise address sources of discharges. The Action Plan will ensure that each Permittee identifies high-priority areas for inspection and investigation, regularly surveys those areas at a specified frequency, identifies which staff within each Permittee will be responsible for completing field surveys, identifies how illicit discharge control activities are documented, and ensures that appropriate enforcement is taken for problem discharges. In short, it will serve as the framework document for each Permittee to appropriately control illicit discharges.

15. The Program and the Permittees are committed to a process of evaluating the effectiveness and improving the Performance Standards and plans contained in the Management Plan, which includes seeking new opportunities to control stormwater pollution and to protect beneficial uses. Changes and updates to control measures, Best Management Practices, and Performance Standards will be documented in the Annual Report and, following Regional Board approval, will be considered part of the Management Plan and an enforceable component of this Order.

Finding 16: Cooperative Effort Among Entities

16. The Program participates in, and contributes to, joint efforts with other entities, including regulatory agencies, public benefit corporations, universities, and citizens' groups. These entities may take a lead role in addressing particular sources because they are regional, statewide or national in scope, because they have different skills or expertise, or because they have appropriate regulatory authority.

Finding 17: Annual Reviews

17. The Regional Board staff will perform, in coordination with the Permittees and interested persons, an annual performance review and evaluation of the Program, the Permittees and their compliance activities. The reviews are a useful means of evaluating overall Program effectiveness, implementation of Performance Standards, and improvement opportunities. The following areas will be evaluated:

    a. Overall Program and Permittee effectiveness and compliance;

    b. Performance Standard improvements;

c. Permittees' coordination and implementation of watershed-based management actions (e.g., flood management, new development and construction, industrial source controls, public information/participation, monitoring);

d. Partnership opportunities with other Bay Area stormwater programs; and

e. Consistency in meeting maximum extent practicable measures within the Program and with other regional, statewide, and national municipal stormwater management programs.

Findings 18-25: Applicable Federal, State and Regional Regulations

18. Section 402(p) of the federal Clean Water Act (CWA), as amended by the Water Quality Act of 1987, requires NPDES permits for stormwater discharges from separate municipal storm drain systems, stormwater discharges associated with industrial activity (including construction activities), and designated stormwater discharges which are considered significant contributors of pollutants to waters of the United States. On November 16, 1990, US EPA published regulations (40 CFR Part 122) which prescribe permit application requirements for municipal separate storm drain systems pursuant to Section 402(p) of the CWA. On May 17, 1996, US EPA published an Interpretive Policy Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems (MS4s), which provided guidance on permit application requirements for regulated MS4s.

19. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on June 21, 1995, which was approved by the State Water Resources Control Board and the Office of Administrative Law on July 21 and November 13 of 1995, respectively. This updated and consolidated plan represents the Regional Board's master water quality control planning document. The Urban Runoff Management, Comprehensive Control Program section of the Basin Plan requires the Permittees to address existing water quality problems and prevent new problems associated with urban runoff through the development and implementation of a comprehensive control program focused on reducing current levels of pollutant loading to storm drains to the maximum extent practicable. The Basin Plan comprehensive program requirements are designed to be consistent with federal regulations (40 CFR Parts 122-124) and are implemented through issuance of NPDES permits to owners and operators of storm drain systems. A summary of the regulatory provisions is contained in Title 23 of the California Code of Regulations at Section 3912. The Basin Plan identifies beneficial uses and establishes water quality objectives for surface waters in the Region, as well as effluent limitations and discharge prohibitions intended to protect those uses. This Order implements the plans, policies, and provisions of the Regional Board's Basin Plan.

20. The State Water Resources Control Board (State Board) has issued NPDES general permits for the regulation of stormwater discharges associated with industrial activities and construction activities. To effectively implement the New Development (and significant redevelopment) and Construction Controls, Illicit Discharge Controls, and Industrial and Commercial Discharge Controls components of the Management Plan, the Permittees will conduct investigations and local regulatory activities at industries and construction sites covered by these general permits. However, under the Clean Water Act, the Regional Board cannot delegate to the Permittees its own authority to enforce these general permits. Therefore, Regional Board staff intend to work cooperatively with the Permittees to ensure that industries and construction sites within the Permittees' jurisdictions are in compliance with applicable general permit requirements and are not subject to uncoordinated stormwater regulatory activities.

21. The beneficial uses of Central, Lower and South San Francisco Bay, its tributary streams and contiguous water bodies, and other water bodies within the drainage basin are listed in the Basin Plan.

22. The Regional Board considers stormwater discharges from urban and developing areas in the San Francisco Bay Region, such as Alameda County, to be significant sources of certain pollutants in waters of the Region that may be causing or threatening to cause or contribute to water quality impairment. Furthermore, as delineated on the CWA Section 303(d) list, the Regional Board has found that there is a reasonable potential that municipal stormwater discharges may cause or contribute to an excursion above water quality standards for: mercury, PCBs, dioxins, furans, diazinon, dieldrin, chlordane, DDT, copper, and selenium in Central San Francisco Bay; diazinon in all urban creeks in Alameda County; and trash and low dissolved oxygen in Lake Merritt. In accordance with CWA Section 303(d), the Regional Board is required to establish Total Maximum Daily Loads (TMDLs) for these pollutants to these waters in order to gradually eliminate impairment and attain water quality standards. Therefore, certain early actions and/or further assessments by the Permittees are warranted and required pursuant to this Order.

23. The Regional Board considers the Management Plan an essential component of an urban watershed management plan for urbanized portions of Alameda County, and the portions of Alameda County that are currently being developed. The Management Plan is intended to provide a framework for protection and restoration of Alameda County watersheds and the Central, Lower and South San Francisco Bay in part through effective and efficient implementation of appropriate control measures for sources of pollutants within the watersheds.

24. The San Francisco Estuary Project, established pursuant to CWA Section 320, culminated in June 1993 with completion of its Comprehensive Conservation and Management Plan (CCMP) for the preservation, restoration, and enhancement of the San Francisco Bay-Delta Estuary. The CCMP includes recommended actions in the areas of aquatic resources, wildlife, wetlands, water use, pollution prevention and reduction, dredging and waterway modification, land use, public involvement and education, and research and monitoring. Recommended actions which may, in part, be addressed through implementation of the Permittees' Management Plan include, but are not limited to, the following:

    a. Action PO-2.1: Pursue a mass emissions strategy to reduce pollutant discharges into the Estuary from point and nonpoint sources and to address the accumulation of pollutants in estuarine organisms and sediments.

    b. Action PO-2.4: Improve the management and control of urban runoff from public and private sources.

    c. Action PO-2.5: Develop control measures to reduce pollutant loadings from energy and transportation systems.

    d. Action LU-1.1: Local General Plans should incorporate watershed protection plans to protect wetlands and stream environments and reduce pollutants in runoff.

    e. Action LU-3.1: Prepare and implement Watershed Management Plans that include the following complementary elements: 1) wetlands protection, 2) stream environment protection, and, 3) reduction of pollutants in runoff.

f. Action LU-3.2: Develop and implement guidelines for site planning and Best Management Practices.

g. Action PI-2.3: Work with educational groups, interpretive centers, decision-makers, and the general public to build awareness, appreciation, knowledge, and understanding of the Estuary's natural resources and the need to protect them. This would include how these natural resources contribute to and interact with social and economic values.

25. This action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Division 13 of the Public Resources Code, Chapter 3, Section 21100, et. seq.) in accordance with Section 13389 of the California Water Code.

Findings 26-30: Nature of Discharges and Sources of Pollutants

26. The discharge consists of the surface runoff generated from various land uses in all the hydrologic sub basins in the basin which discharge into watercourses, which in turn flow into Central, Lower and South San Francisco Bay.

27. The quality and quantity of runoff discharges varies considerably and is affected by hydrology, geology, land use, season, and sequence and duration of hydrologic event. Pollutants of concern in these discharges are certain heavy metals, excessive sediment production from erosion due to anthropogenic activities, petroleum hydrocarbons from sources such as used motor oil, microbial pathogens of domestic sewage origin from illicit discharges, certain pesticides associated with the risk of acute aquatic toxicity, excessive nutrient loads which may cause or contribute to the depletion of dissolved oxygen and/or toxic concentrations and dissolved ammonia, trash which impairs beneficial uses including but not limited to support for aquatic life, and other pollutants which may cause aquatic toxicity in the receiving waters.

28. Certain pollutants present in stormwater and/or urban runoff may be derived from extraneous sources that the Permittees have limited or no direct jurisdiction over. Examples of such pollutants and their respective sources are polycyclic aromatic hydrocarbons (PAHs) which are products of internal combustion engine operation and other sources; heavy metals, such as copper from brake pad wear and zinc from tire wear; dioxins as products of combustion; mercury resulting from atmospheric deposition; and natural-occurring minerals from local geology. All of these pollutants, and others, may be deposited on paved surfaces, rooftops, and other impervious surfaces as fine airborne particles, thus yielding stormwater runoff pollution that is unrelated to the particular activity associated with a given new or redevelopment project.

29. It may be more efficient to manage airborne pollutants at their sources of release and/or through reformulating pollutant-generating products rather than through treatment of stormwater. However, unless restricted by jurisdictional limitations, Permittees can implement structural treatment control measures, or require developers to implement structural treatment control measures to reduce entry of these pollutants into stormwater and their discharge to receiving waters.

30. Retail gasoline outlets (RGOs), commonly referred to as "gas stations," are sources for pollutants of concern in stormwater and have been widely documented as such. The most common pollutants of concern in stormwater runoff from RGOs are heavy metals, petroleum

hydrocarbons (such as Polycyclic Aromatic Hydrocarbons (PAHs)), and oil and grease.[1] RGOs fall within the new development and significant redevelopment projects subject to Provision C.3 of this Order, when they meet the impervious surface thresholds within that Provision. Pursuant to Provision C. 3., as with any other project meeting the thresholds of that Provision, RGOs are required to incorporate appropriate source controls and design measures, and to appropriately treat stormwater runoff prior to discharge to the storm drain or local water. As with any commercial and/or industrial activity within the Permittees' jurisdictions that has the potential to discharge pollutants in stormwater runoff, RGOs may also be subject to regulation under other sections of the Permit and Management Plan, including the Illicit Discharge Control and Industrial and Commercial Discharge Control sections.

Findings 31-41 in Support of Provision C.3: New Development and Redevelopment Performance Standards

31. Urban Development Increases Pollutant Load, Volume, and Velocity of Runoff: During urban development two important changes occur. First, natural vegetated pervious ground cover is converted to impervious surfaces such as paved highways, streets, rooftops, and parking lots. Natural vegetated soil can both absorb rainwater and remove pollutants providing a very effective natural purification process. Because pavement and concrete can neither absorb water nor remove pollutants, the natural purification characteristics of the land are lost. Secondly, urban development creates new pollution sources as human population density increases and brings with it proportionately higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc., which can be washed into the municipal separate storm sewer system. As a result of these two changes, the runoff leaving the developed urban area is significantly greater in volume, velocity and pollutant load than the pre-development runoff from the same area.

32. The pollutants found in urban runoff can have damaging effects on both human health and aquatic ecosystems. In addition, the increased flows and volumes of stormwater discharged from new impervious surfaces resulting from new development and redevelopment can significantly impact beneficial uses of aquatic ecosystems due to physical modifications of watercourses, such as bank erosion and widening of channels.

33. Water Quality Degradation Increases with Percent Imperviousness: The increased volume and velocity of runoff from developed urban areas can greatly accelerate the erosion of downstream natural channels. A number of studies have demonstrated a direct correlation between the degree of imperviousness of an area and the degradation of beneficial uses of downstream receiving waters. Significant declines in the biological integrity and physical habitat of streams and other receiving waters have been found to occur with as little as a 10% conversion from natural to impervious surfaces. Typical medium-density single-family home projects range between 25 to 60% impervious. Even at very low densities, such as 1-2 housing units per acre, standard subdivision designs can exceed the 10% imperviousness threshold that, as noted above, is theorized to be the threshold for degradation of streams and other waters with increasing

[1] *Retail Gasoline Outlets: New Development Design Standards for Mitigation of Stormwater Impacts* – California Water Quality Control Board, Los Angeles Region, and California Water Quality Control Board, San Diego Region, Technical Report, prepared by Radulescu, Swamikannu, and Hammer, 2001.

imperviousness of their catchment.[2] Studies on the impacts of imperviousness on beneficial uses of waters include "Urbanization of aquatic systems: Degradation thresholds, stormwater detection, and the limits of mitigation," Derek B. Booth and C. Rhett Jackson, Journal of the American Water Resources Association 33(5), Oct. 1997, pp. 1077-1089; "Urbanization and Stream Quality Impairment," Richard D. Klein, Water Resources Bulletin 15(4), Aug. 1979, pp. 948-963; "Stream channel enlargement due to urbanization," Thomas R. Hammer, Water Resources Research 8(6), Dec. 1972, pp. 1530- 1540; and, summaries of work on the impacts of imperviousness, including "The Importance of Imperviousness," in Watershed Protection Techniques 1(3), Fall 1994, pp. 100-111, and "Impervious surface coverage: The emergence of a key environmental indicator," Chester L. Arnold et al., Journal of the American Planning Association 62(2), Spring 1996, pp.243-259.

34. The Permittees have encouraged developers to minimize increases in impervious surfaces through a number of techniques such as those described in the Bay Area Stormwater Management Agencies Association's (BASMAA's) "Start at the Source Design Guidance Manual for Stormwater Quality Protection," 1999 edition (Start at the Source). One of the techniques recommended by Start at the Source is to use permeable pavements to infiltrate stormwater while still providing a stable load-bearing surface. For purposes of this Order, the Program may submit guidelines for use of these techniques for minimizing increases in impervious surfaces described in Start at the Source, implementation of which techniques will provide that such areas will not count toward the creation or replacement of impervious surfaces, or may be modeled differently for the purposes of sizing post-construction stormwater treatment controls, for approval of the Regional Board's Executive Officer.

35. Because land use planning is where urban development begins, it is the phase in which the greatest and most cost-effective opportunities to protect water quality in new and redevelopment exist. When a Permittee incorporates policies and principles designed to safeguard water resources into its General Plan and development project approval processes, it has taken a far-reaching step towards the preservation of local water resources for future generations.

36. Provision C.3 is written with the assumption that the Permittees are responsible for considering potential stormwater impacts when making planning and land use decisions. The goal of these requirements is to address pollutant discharges and changes in runoff flows from new development and significant redevelopment projects, through implementation of post-construction and treatment measures, source control, and site design measures, to the maximum extent practicable. Neither Provision C.3 nor any of its requirements are intended to restrict or control local land use decision-making authority.

37. For the purposes of this Order, the term "Redevelopment" is defined as a project on a previously developed site that results in the addition or replacement of impervious surface, and the term "brownfield site" means real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.

38. Opportunities to address stormwater pollution and hydrograph modification can be limited by current local design standards and guidance. For example, such standards and guidance may

[2] A discussion of imperviousness based on type of development and time of construction is provided in Heaney, J.B., Pitt, R, and Field, R. **Innovative Urban Wet-Weather Flow Management Systems**, 1999. USEPA Doc. No. EPA/600/R-99/029 (Chapter 2).

reduce or prohibit opportunities to minimize impervious surfaces, minimize directly connected impervious area, provide for small-scale detention, and implement other management measures. Revision of current standards and guidance can result in a significantly increased ability for project designers to minimize project impacts and can also enhance local property values, neighborhood character, and overall quality of life. Further, revision of standards and guidance can allow implementation of site design measures in projects to meet or help meet the numeric sizing criteria in Provision C.3.d and/or the hydrograph modification limitation in Provision C.3.f.

39. Certain control measures implemented or required by Permittees for urban runoff management may create a habitat for vectors (e.g., mosquitoes and rodents) if not properly designed or maintained. Close collaboration and cooperative effort among Permittees, local vector control agencies, Regional Board staff, and the State Department of Health Services is necessary to minimize potential nuisances and public health impacts resulting from vector breeding.

40. Provision C.3.f requires the Permittees to prepare a Hydrograph Modification Management Plan (HMP), for approval by the Regional Board, to manage impacts from changes to the volume and velocity of stormwater runoff from new development and significant redevelopment projects, where these changes can cause excessive erosion damage to downstream watercourses. Transit village type developments within ¼ to within ½ mile of transit stations and/or intermodal facilities, and projects within "Redevelopment Project Areas" (as defined by Health and Safety Code Section 33000, et seq.) that redevelop an existing brownfield site or create housing units affordable to persons of low or moderate income as defined by Health and Safety Code Section 50093, are excepted from the requirements of C.3.f and the HMP. Significant change in impervious surface or significant change in stormwater runoff volume or timing is unlikely in these redevelopment circumstances, because these developments would be within a largely already paved catchment, and on a site that is largely already paved or otherwise impervious.

    Similarly, as specified in Provision C.3.g.v, an exemption without the requirement for alternate, equivalent offsite treatment is allowed for the following redevelopment projects after impracticability of including onsite treatment measures is established, where such projects are built as redevelopment projects as defined in Finding 14, and it is clearly demonstrated that cost of participation in alternate, equivalent offsite treatment through a regional treatment or other equivalent water quality benefit project fund will unduly burden the project: creation of housing units affordable to persons of low or moderate income as defined by Health and Safety Code Section 50093, brownfield sites, and/or transit village type developments within 1/4 mile of transit stations and/or intermodal facilities. Not only is significant change in impervious surface or significant change in stormwater runoff volume or timing unlikely in these redevelopment circumstances, but these redevelopment projects are also likely to provide reduced water quality impacts and/or other environmental benefits in their own right.

41. The Regional Board recognized in its "Policy on the Use of Constructed Wetlands for Urban Runoff Pollution Control" (Resolution No. 94-102) that urban runoff treatment wetlands that are constructed and operated pursuant to that Resolution and are constructed outside of a creek or other receiving water, are stormwater treatment systems and, as such, are not waters of the United States subject to regulation pursuant to Sections 401 or 404 of the federal Clean Water Act. Regional Board staff is working with the California Department of Fish and Game (CDFG) and U.S. Fish and Wildlife Service (USFWS) to identify how maintenance for stormwater

treatment controls required under permits such as this Permit can be appropriately streamlined, given CDFG and USFWS requirements, and particularly those that address special status species. The Permittees are expected to work diligently and in good faith with the appropriate agencies to obtain any approvals necessary to complete maintenance activities for treatment controls. If the Permittees have done so, when necessary and where maintenance approvals are not granted, the Permittees shall be considered by the Regional Board to be in compliance with Provision C.3.e of this Order.

Finding in Support of Provision C.4: Public Information and Participation Performance Standards

42. The implementation of a public information and participation program is a critical component of a stormwater management program. An informed and knowledgeable community is critical to the success of a stormwater program because it helps ensure greater support for the program as the public gains a greater understanding for stormwater pollution issues. An informed community also ensures greater compliance with the program as the public becomes aware of the personal responsibilities expected of them and others in the community, including the individual actions they can take to protect or improve the quality of area waters.

Finding in Support of Provision C.5: Performance Standards for Municipal Maintenance

43. Provision C.5 requires the Permittees to implement the municipal maintenance Performance Standards as set forth in the Management Plan, including, but not limited to, activities as described below. The work of municipal maintenance personnel is vital to minimize stormwater pollution, because personnel work directly on municipal storm drains and other municipal facilities (e.g., roads, parking lots, sidewalks, parks, landscaping, etc.). Through work such as inspecting and cleaning storm drain drop inlets and pipes and appropriately conducting municipal construction and maintenance activities upstream of the storm drain, municipal maintenance personnel are directly responsible for preventing and removing pollutants from the storm drain. Maintenance personnel also play an important role in educating the public and in reporting and cleaning up illicit discharges.

Finding in Support of Provision C.6: Performance Standard for Rural Public Works Maintenance and Support

44. Provision C.6 requires the Permittees to create an effective Best Manangement Practice (BMP) approach for the following rural public works maintenance and support activities: a) management and/or removal of large woody debris and live vegetation from stream channels; b) streambank stabilization projects; c) road construction, maintenance, and repairs in rural areas to prevent and control road-related erosion; and d) environmental permitting for rural public works activities. Road construction and other activities can disturb the soil and drainage patterns to streams in undeveloped areas, causing excess runoff and thereby erosion and the release of sediment. In particular, poorly designed roads can act as man-made drainages that carry water and sediment into natural streams, impacting water quality. In addition, other rural public works activities, including those the BMP approach would address, have the potential to significantly affect sediment discharge and transport within streams and other waterways, which can degrade the beneficial uses of those waterways. This Provision would help ensure these impacts are appropriately controlled.

Findings 45-46: Monitoring

45. Provision C.8 requires the annual and multi-year submittal and implementation of a Monitoring Program Plan, to include monitoring of receiving waters, in accordance with 40 CFR Parts 122.44(I) and 122.48. The purpose of the Monitoring Program Plan is to demonstrate the effectiveness of the Program's Management Plan and accordingly, demonstrate compliance with the conditions of the Permit. On April 15, 1992, the Regional Board adopted Resolution No. 92-043 directing the Executive Officer to implement the Regional Monitoring Program for San Francisco Bay. Subsequent to a public hearing and various meetings, Board staff requested major permit holders in the Region, under authority of Section 13267 of California Water Code, to report on the water quality of the Estuary. These permit holders, including the Permittees, responded to this request by participating in a collaborative effort through the San Francisco Estuary Institute. This effort has come to be known as the San Francisco Estuary Regional Monitoring Program for Trace Substances (RMP). The RMP involves collection and analysis of data on pollutants and toxicity in water, sediment and biota of the Estuary. The Permittees should continue to report on the water quality of the estuary, as presently required. Compliance with the requirement through participation in the RMP is considered to be adequate compliance. Alternatively, the Permittees may submit and implement an acceptable alternative monitoring plan. Annual reports from the RMP are referenced elsewhere in this Order.

46. The Regional Board has received the Program's draft Watershed Assessment and Monitoring Strategy for Fiscal Years 2002-2008, appended to this Order as Attachment B. The goal of this monitoring strategy is to support the development and implementation of the Management Plan and demonstrate its effectiveness along with showing the results of the Program's related monitoring work.

Finding in Support of Provision C.9

47. Provision C.9 requires identification of the non-prohibited types of discharges that the Permittees wish to exempt from Prohibition A. For conditionally exempted discharges which are pollutant sources, the Provision requires the Permittees to identify and incorporate into the Management Plan control measures to minimize the adverse impact of such sources. This Provision also establishes a mechanism to authorize under the Permit non-stormwater discharges owned or operated by the Permittees. The Program has developed a list of BMPs to eliminate adverse impacts of conditionally exempt discharges such as uncontaminated pumped groundwater, foundation drains, water from crawl spaces pumps, footing drains and planned and unplanned discharges from potable water sources, and water line and hydrant flushing.

Finding in Support of Provision C.10: Water Quality-Based Requirements for Specific Pollutants of Concern

48. This Provision requires the Permittees to implement programs to control pollutants that have the reasonable potential to cause or contribute to exceedances of water quality standards, including programs for copper, mercury, pesticides, polycholorinated biphenyls (PCBs) and dioxin-like compounds, and sediment, pursuant to the schedule provided in the Order. In addition, pursuant to Provision C.1 of this Order, if exceedances of water quality objectives persist notwithstanding implementation of Provisions C.2 through C.8 of this Order and the Plan, a Permittee shall report to the Regional Board on the control measures that are being implemented to reduce the amount of pollutants, and develop a plan to further address the pollutants that cause impairment over time. In response to prior Provision C.1 submissions, the Regional Board is including additional

requirements in Provision C.10 of this Order to continue implementation of previously delineated pollutant specific control measures and identification and implementation of additional control measures necessary to prevent or reduce discharges of pollutants that are causing or contributing to the exceedance of water quality standards.

Findings 49-50: Mercury

49. In 1998, the Regional Board met in a public hearing and adopted a CWA Section 303(d) list that classified all of San Francisco Bay as impaired due to mercury. The Permit requires Permittees to control mercury, which has been found by the Regional Board to have the reasonable potential to cause or contribute to exceedances of water quality standards, to the maximum extent practicable.

50. To reduce levels of mercury in stormwater discharges, the Permittees have begun to implement a Mercury Pollutant Reduction Plan (Mercury Plan).

Finding 51: Pesticides

51. The Program conducted pioneering studies starting in 1994, determining that diazinon from urban runoff was responsible for toxicity in urban creeks. The Permit requires the Permittees to address pesticides, which have been found by the Regional Board to have the reasonable potential to cause or contribute to exceedances of water quality standards. The Program has submitted a proactive Diazinon Pollutant Reduction Plan, hereafter referred to as the "Pesticide Plan." The goals of the Pesticide Plan and of its resulting implementing actions are to reduce or substitute pesticide use (especially diazinon use) with less toxic alternatives.

Findings 52-55: PCBs and Dioxins

52. US EPA lists PCBs as a potential carcinogen. In addition, PCBs are suspected of having negative impacts on the human immune system, reproductive system, nervous system, endocrine system, and digestive system. Although their manufacture is now banned in the United States, PCBs continue to pose a serious risk due to their persistence in the environment. PCBs accumulate in fatty tissue. This is important to human health in that several of the more common food fishes in the Bay (e.g., striped bass, white croaker) are marked by relatively high fat content. The California Office of Environmental Health and Hazard Assessment issued an interim fish consumption advisory for all of San Francisco Bay, partly based on PCB concentrations found in Bay fishes.

53. Urban runoff is highly likely to be a conveyance mechanism associated with the impairment of San Francisco Bay for PCBs.

54. The Permit requires Permittees to control PCBs, which have been found by the Regional Board to have the reasonable potential to cause or contribute to exceedances of water quality standards, to the maximum extent practicable. The Program has submitted a PCBs Pollutant Reduction Plan. This Plan includes surveys of stream sediments to assess concentrations and loadings of PCBs, assesses potential for ongoing discharges of PCBs, and develops a plan to reduce discharges of PCBs in runoff.

55. Dioxins are persistent, bioaccumulative, toxic compounds that are produced from the combustion of organic materials in the presence of chlorine. Dioxins enter the air through fuel and waste emissions, including diesel and other motor vehicle exhaust fumes and trash incineration, and are carried in rain and contaminate soil. Dioxins bioaccumulate in fat and most human exposure occurs through the consumption of animal fats, including those from fish.

Findings 56-58: Implementation

56. It is the Regional Board's intent that this Order shall ensure attainment of applicable water quality objectives and protection of the beneficial uses of receiving waters and associated habitat. This Order therefore includes standard requirements to the effect that discharges shall not cause exceedances of water quality objectives nor shall they cause certain conditions to occur which create a condition of nuisance or water quality impairment in receiving waters. Accordingly, the Regional Board is requiring that these standard requirements be addressed through the implementation of technically and economically feasible control measures to reduce pollutants in stormwater discharges to the maximum extent practicable as provided in Provisions C.1 through C.10 of this Order. Compliance with the Discharge Prohibition, Receiving Water Limitations, and Provisions of this Order is deemed compliance with the requirements of this Order. If these measures, in combination with controls on other point and nonpoint sources of pollutants, do not result in attainment of applicable water quality objectives, the Regional Board may invoke Provision C.1 and may reopen this Permit pursuant to Provisions C.1 and C.13 of this Order to impose additional conditions which require implementation of additional control measures.

57. It is generally not considered feasible at this time to establish numeric effluent limitations for pollutants in municipal stormwater discharges. Instead, the provisions of this permit require implementation of BMPs to the maximum extent practicable to control and abate the discharge of pollutants in stormwater discharges.

58. The Program is organized, coordinated, and implemented based upon the "Agreement for Implementation of the Alameda County Urban Runoff Clean Water Program," now Alameda Countywide Clean Water Program, and referred to in this Order as the Program. The agreement is provided as Appendix A of the Management Plan. The roles and responsibilities of the Permittees are, in part, as follows:

    a. The Management Committee, which includes representatives from all of the Permittees, is the decision making body of the Program. It operates within the budget and policies established by the Permittees' governing boards and councils to decide matters of budget and policy necessary to implement the Management Plan, and provides direction to the Program Manager and staff. The Management Committee has established subcommittees to assist in planning and implementation of the Management Plan, and may add, modify, or delete such groups as deemed necessary.

    b. Each of the Permittees is individually responsible for adoption and enforcement of ordinances and policies, implementation of assigned control measures/ BMPs needed to prevent or reduce pollutants in stormwater, and for providing funds for the capital, operation, and maintenance expenditures necessary to implement such control measures/BMPs within its jurisdiction. Each Permittee is also responsible for its share of the costs of the area-wide component of the Program as specified in the Agreement. Except for area-wide components of the Program, enforcement actions concerning this Order will be pursued only against the individual Permittee(s) responsible for specific violations of this Order.

Findings 59-64: Public Process

59. Regional Board staff has worked in cooperation with the Program to develop a Tentative Order and the Performance Standards in the Management Plan. Regional Board staff conducted a series

of meetings with the Stormwater Quality Management Plan (SWQMP) coordinating committee, a subgroup of the Program. These meetings included Regional Board staff and representatives of the Permittees. Through this process, the SWQMP coordinating committee attempted to identify, prioritize, and resolve issues related to the Permittees' and Program's performance, the Management Plan, and this Order, and attempted to develop a consensus concerning the requirements reflected herein.

60. The following is a brief summary of public meetings and comment periods on versions of the Permit's Tentative Order. Regional Board staff met with the SWQMP coordinating committee on February 22, March 22, April 26, and May 23, 2002. The administrative draft was released on June 6, 2002, and comments on the draft were received until June 27, 2002. Regional Board staff met with a workgroup consisting of representatives of the Permittees on July 17, July 25, August 5, and October 28, 2002, and with representatives of the Natural Resources Defense Council (NRDC) on July 18, 2002. The Permittees and Regional Board staff together conducted three outreach workshops on the portions of the Tentative Order addressing new development and redevelopment. Workshops were held on July 18, 2002, in Hayward; on July 25, 2002, in Oakland; and on July 29, 2002, in Pleasanton; and were attended by Permittee staff and other interested parties, including consultants and builders. Regional Board staff also met on dates including April 23, May 22, and October 30, 2002, with representatives of the Coastal Region Vector Control Agencies, including representatives of the Alameda County Mosquito Abatement District and the State Department of Health Services. On December 18, 2002, and January 22, 2003, the Regional Board heard testimony from the Dischargers and interested public on the Revised Tentative Order. On January 17 and 31, and February 7 and 14, 2003, Regional Board staff conducted public meetings on the Revised Tentative Order.

    The Tentative Order was released for public comments on August 21, 2002, by surface mail, electronic mails and posting on the Regional Board website. Comments on the Tentative Order were accepted until October 9, 2002. Based on comments received, appropriate changes were made and submitted to the Regional Board as a Revised Tentative Order for its consideration on December 18, 2002. From December 20, 2002, to January 10, 2003, the comment period was reopened by the Regional Board to allow additional submittals relative to projected cost of the amendment of Order No. 99-058 to both the Dischargers and the development community.

61. The Regional Board has notified the Permittees and interested agencies and interested persons of its intent to prescribe reissued waste discharge requirements and a reissued NPDES permit for this discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

62. The Regional Board, through public testimony in public meetings and in written form, has received and considered all comments pertaining to this Order.

63. The Regional Board will notify interested agencies and interested persons of the availability of reports, plans, and schedules, including Annual Reports, Work Plans, Performance Standards, and the Management Plan, and will provide interested persons with an opportunity for a public hearing and/or an opportunity to submit their written views and recommendations. The Regional Board will consider all comments and may modify the reports, plans, or schedules or may modify this Order in accordance with applicable law. All submittals required by this Order conditioned with acceptance by the Regional Board will be subject to these notification, comment, and public hearing procedures.

64. This Order supercedes and rescinds Order Nos. 97-030 and 99-049.

65. This Order serves as a NPDES permit, pursuant to CWA Section 402, or amendments thereto, and shall become effective fifty days after the date of its adoption provided the Regional Administrator, US EPA, Region IX, has no objections.

IT IS HEREBY ORDERED that the Permittees, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted hereunder and the provisions of the Clean Water Act as amended and regulations and guidelines adopted hereunder, shall comply with the following:

A. DISCHARGE PROHIBITION

The Permittees shall, within their respective jurisdictions, effectively prohibit the discharge of non-stormwater (materials other than stormwater) into the storm drain systems and watercourses. NPDES permitted discharges are exempt from this prohibition. Compliance with this prohibition shall be demonstrated in accordance with Provision C.1 and C.9 of this Order. Provision C.9 describes a tiered categorization of non-stormwater discharges based on potential for pollutant content, which may be discharged upon adequate assurance that the discharge contains no pollutants of concern, at concentrations that will impact beneficial uses or cause exceedances of water quality standards.

B. RECEIVING WATER LIMITATIONS

1. The discharge shall not cause the following conditions to create a condition of nuisance or to adversely affect beneficial uses of waters of the State:

a. Floating, suspended, or deposited macroscopic particulate matter, or foam;

b. Bottom deposits or aquatic growths;

c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

d. Visible, floating, suspended, or deposited oil or other products of petroleum origin; and/or

e. Substances present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption.

2. The discharge shall not cause or contribute to a violation of any applicable water quality standard for receiving waters. If applicable water quality objectives are adopted and approved by the State Board after the date of the adoption of this Order, the Regional Board may revise and modify this Order as appropriate.

C. PROVISIONS

1. Water Quality Standards Exceedances

The Permittees shall comply with Discharge Prohibition A and Receiving Water Limitations B.1 and B.2 through the timely implementation of control measures and other actions to reduce pollutants in the discharge in accordance with the Management Plan and other requirements of this permit, including any modifications. The Management Plan shall be designed to achieve compliance with Receiving Water Limitations B.1 and B.2. If exceedance(s) of water quality standards or water quality objectives (collectively, WQSs) persist notwithstanding implementation of the Management Plan, a Permittee shall assure compliance with Discharge Prohibition A and Receiving Water Limitations B.1 and B.2 by complying with the following procedure:

a. Upon a determination by either the Permittee(s) or the Regional Board that discharges are causing or contributing to an exceedance of an applicable WQS, the Permittee(s) shall promptly notify and thereafter submit a report to the Regional Board that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of WQSs. The report may be incorporated in the annual update to the Management Plan unless the Regional Board directs an earlier submittal. The report shall include an implementation schedule. The Regional Board may require modifications to the report;

b. Submit any modifications to the report required by the Regional Board within 30 days of notification;

c. Within 30 days following approval of the report described above by the Regional Board, the Permittees shall revise the Management Plan and monitoring program to incorporate the approved modified control measures that have been and will be implemented, the implementation schedule, and any additional monitoring required; and,

d. Implement the approved revised Management Plan and monitoring program in accordance with the approved schedule.

As long as Permittees have complied with the procedures set forth above and are implementing the revised Management Plan, they do not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the Regional Board to develop additional control measures and BMPs.

2. Stormwater Quality Management Plan and Performance Standards

a. The Permittees shall implement control measures/BMPs to reduce pollutants in stormwater discharges to the maximum extent practicable. The Management Plan shall serve as the framework for identification, assignment, and implementation of practices of such control measures/BMPs. The Management Plan contains Performance Standards that address the following Program components: Public Information and Participation, Municipal Maintenance, New Development and Significant Redevelopment, Construction Site Controls, Illicit Discharge Controls, and Industrial and Commercial Discharge Controls. Performance Standards are defined as the level of implementation necessary to demonstrate the control of pollutants in stormwater to the maximum extent practicable. The Permittees shall implement the Management Plan, and shall subsequently demonstrate its effectiveness and provide for necessary and appropriate revisions, modifications, and improvements to reduce pollutants in stormwater discharges to the maximum extent practicable and as required by Provisions C.1 through C.11 of this Order.

b. The Management Plan shall be revised to adopt and incorporate any new Performance Standards developed by the Permittees or any revised Performance Standard identified by the Permittees through the Program's process for evaluating and improving its effectiveness or other means described in Provision C.1. Performance Standards shall be developed or revised through a process which includes 1) opportunities for public participation, 2) appropriate external technical input and criteria for the applicability, economic feasibility, design, operation, and maintenance, and 3) measures for evaluation of effectiveness so as to achieve pollutant reduction or pollution prevention benefits to the maximum extent practicable. New or revised Performance Standards may be based upon special studies or other activities conducted by the Permittees, literature review, or special studies conducted by other programs or Permittees. New or revised

Performance Standards shall include the baseline components to be accomplished and the method to be used to verify that the Performance Standard has been achieved. The Permittees shall incorporate newly developed or updated Performance Standards, acceptable to the Executive Officer, into applicable annual revisions to the Management Plan and adhere to implementation of the new/revised Performance Standard(s). In addition to the annual Management Plan revisions, the Permittees shall submit a compilation of all annual Management Plan revisions by three years after Board adoption of this Order, which shall serve in part as the re-application package for the next Permit. The draft Annual Workplan required in Provision C.6 shall identify Performance Standards that will be developed or revised for the upcoming fiscal year. Following the addition/revision of a Performance Standard, acceptable to the Executive Officer, the Permittees for which the Performance Standard is applicable shall adhere to its implementation.

3. New Development and Redevelopment Performance Standards

The Permittees will continue to implement the new development and redevelopment Performance Standards contained in the Management Plan and improve them to achieve the control of stormwater pollutants to the maximum extent practicable in accordance with the following sections:

a. Performance Standard Implementation

The Dischargers shall continue to implement and improve, as necessary and appropriate, the performance standards for new development and redevelopment controls detailed on Pages B-ND-1 through B-ND-6 of the July 1996 Management Plan.

b. Development Project Approval Process

The Permittees shall modify their project review processes as needed to incorporate the requirements of Provision C.3. Each Permittee shall include conditions of approval in permits for applicable projects, as defined in Provision C.3.c, to ensure that stormwater pollutant discharges are reduced by incorporation of treatment measures and other appropriate source control and site design measures, and increases in runoff flows are managed in accordance with Provision C.3.f, to the maximum extent practicable. Such conditions shall, at a minimum, address the following goals:

i. Require a project proponent to implement site design/landscape characteristics where feasible which maximize infiltration (where appropriate), provide retention or detention, slow runoff, and minimize impervious land coverage, so that post-development pollutant loads from a site have been reduced to the maximum extent practicable; and

ii. For new and redevelopment projects that discharge directly (not mixed with runoff from other developed sites) to water bodies listed as impaired by a pollutant(s) pursuant to CWA Section 303(d), ensure that post project runoff does not exceed pre-project levels for such pollutant(s), through implementation of the control measures addressed in this provision, to the maximum extent practicable, in conformance with Provision C.1.

Modification of project review processes shall be completed by February 15, 2005.

c. Applicable Projects – New and Redevelopment Project Categories

New development and significant redevelopment projects that are subject to Provision C.3 are grouped into two categories based on project size. While all projects regardless of size should consider incorporating appropriate source control and site design measures that minimize

stormwater pollutant discharges to the maximum extent practicable, new and redevelopment projects that do not fall into Group 1 or Group 2 are not subject to the requirements of Provision C.3. Provision C.3 shall also not apply to projects for which a privately-sponsored development application has been deemed complete by a Permittee or, with respect to public projects, for which funding has been committed and for which construction is scheduled by February 15, 2005.

i. Group 1 Projects

Permittees shall require Group 1 Projects to implement appropriate source control and site design measures and to design and implement stormwater treatment measures, to reduce the discharge of stormwater pollutants to the maximum extent practicable. Implementation of this requirement shall begin February 15, 2005. Group 1 Projects consist of all public and private projects in the following categories:

1. Commercial, industrial, or residential developments that create one acre (43,560 square feet) or more of impervious surface, including roof area, streets and sidewalks. This category includes any development of any type on public or private land, which falls under the planning and building authority of the Permittees, where one acre or more of new impervious surface, collectively over the entire project site, will be created.

   Construction of one single-family home, which is not part of a larger common plan of development, with the incorporation of appropriate pollutant source control and design measures, and using landscaping to appropriately treat runoff from roof and house-associated impervious surfaces (e.g., runoff from roofs, patios, driveways, sidewalks, and similar surfaces), would be in substantial compliance with Provision C.3.

2. Streets, roads, highways, and freeways that are under the Permittees' jurisdiction and that create one acre (43,560 square feet) or more of new impervious surface. This category includes any newly constructed paved surface used primarily for the transportation of automobiles, trucks, motorcycles, and other motorized vehicles. Excluded from this category are sidewalks, bicycle lanes, trails, bridge accessories, guardrails, and landscape features.

3. Significant Redevelopment projects. This category is defined as a project on a previously developed site that results in addition or replacement, which combined total 43,560 sq ft or more of impervious surface on such an already developed site ("Significant Redevelopment"). Where a Significant Redevelopment project results in an increase of, or replacement of, more than fifty percent of the impervious surface of a previously existing development, and the existing development was not subject to stormwater treatment measures, the entire project must be included in the treatment measure design. Conversely, where a Significant Redevelopment project results in an increase of, or replacement of, less than fifty percent of the impervious surface of a previously existing development, and the existing development was not subject to stormwater treatment measures, only that affected portion must be included in treatment measure design. Excluded from this category are interior remodels and routine maintenance or repair. Excluded routine maintenance and repair includes roof or exterior surface replacement, pavement resurfacing, repaving and road pavement structural section rehabilitation, within the existing footprint, and any other reconstruction work within a public street or road right-of-way where both sides of that right-of-way are developed.

ii. Group 2 Projects

The Group 2 Project definition is in all ways the same as the Group 1 Project definition above, except that the size threshold of impervious area for new and Significant Redevelopment projects is reduced from one acre (43,560 sq ft) of impervious surface to 10,000 square feet. Permittees shall require Group 2 Projects to implement appropriate source control and site design measures and to design and implement appropriate stormwater treatment measures to reduce stormwater pollution to the maximum extent practicable. Projects consisting of one single family home not part of a larger common plan of development are excluded from the Group 2 Project definition, and therefore excluded from the requirement to implement appropriate stormwater treatment measures. Implementation of this requirement shall begin by August 15, 2006, at which time the definition of Group 1 Projects is changed to include all Group 2 Projects.

iii. Proposal for Alternative Group 2 Project Definition

The Program and/or any Permittee may propose, for approval by the Regional Board, an Alternative Group 2 Project definition, with the goal that any such alternative definition aim to ensure that the maximum created impervious surface area is treated for the minimum number of projects subject to Permittee review. Any such proposal shall contain supporting information about the Permittees' development patterns, and sizes and numbers of proposed projects for several years, that demonstrates that the proposed definition would be substantially as effective as the Group 2 Project definition in Provision C.3.c.ii. Proposals may include differentiating projects subject to the Alternative Group 2 Project definition by land use, by focusing solely on the techniques recommended by Start at the Source for documented low pollutant loading land uses, and/or by optimum use of landscape areas required by Permittees under existing codes as treatment measures. Proposals may be submitted anytime, with the understanding that the Group 2 Project definition, as described in Provision C.3.c.ii will be upheld as the default in the absence of an approved Alternative Group 2 Project definition.

d. Numeric Sizing Criteria For Pollutant Removal Treatment Systems

All Permittees shall require that treatment measures be constructed for applicable projects, as defined in Provision C.3.c, that incorporate, at a minimum, the following hydraulic sizing design criteria to treat stormwater runoff. As appropriate for each criterion, the Permittees shall use or appropriately analyze local rainfall data to be used for that criterion.

i. Volume Hydraulic Design Basis

Treatment measures whose primary mode of action depends on volume capacity, such as detention/retention units or infiltration structures, shall be designed to treat stormwater runoff equal to:

1. The maximized stormwater quality capture volume for the area, based on historical rainfall records, determined using the formula and volume capture coefficients set forth in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ ASCE Manual of Practice No. 87, (1998), pages 175-178 (e.g., approximately the 85th percentile 24-hour storm runoff event); or
2. The volume of annual runoff required to achieve 80 percent or more capture, determined in accordance with the methodology set forth in Appendix D of the California Stormwater Best Management Practices Handbook (1993), using local rainfall data.

ii. Flow Hydraulic Design Basis

Treatment measures whose primary mode of action depends on flow capacity, such as swales, sand filters, or wetlands, shall be sized to treat:

1. 10% of the 50-year peak flow rate; or
2. The flow of runoff produced by a rain event equal to at least two times the 85th percentile hourly rainfall intensity for the applicable area, based on historical records of hourly rainfall depths; or
3. The flow of runoff resulting from a rain event equal to at least 0.2 inches per hour intensity.

e. Operation and Maintenance of Treatment Measures

All treatment measures shall be adequately operated and maintained by complying with the process described below. Beginning July 1, 2004, each Permittee shall implement a treatment measures operation and maintenance (O&M) verification program (O&M Program), which shall include the following:

i. Compilation of a list of properties (public and private) and responsible operators for, at a minimum, all treatment measures implemented from the date of adoption of this Order. Information on the location of all stormwater treatment measures shall be sent to the Alameda County Mosquito Abatement District. In addition, the Permittees shall inspect a subset of prioritized treatment measures for appropriate O&M, on an annual basis, with appropriate follow-up and correction.

ii. Verification and access assurance at a minimum shall include: where a private entity is responsible for O&M, the entity's signed statement accepting responsibility for maintenance until the responsibility is legally transferred to another entity, and access permission to the extent allowable by law for representatives of the Permittee, local vector control district, and Regional Board staff strictly for the purpose of O&M verification for the specific stormwater treatment system to the extent allowable by law; and, for all entities, either:

1. A signed statement from the public entity assuming post-construction responsibility for treatment measure maintenance and that the treatment measures meet all local agency design standards; or
2. Written conditions in the sales or lease agreement requiring the buyer or lessee to assume responsibility for O&M consistent with this provision, which conditions, in the case of purchase and sale agreements, shall be written to survive beyond the close of escrow; or
3. Written text in project conditions, covenants and restrictions (CCRs) for residential properties assigning O&M responsibilities to the home owners association for O&M of the treatment measures; or
4. Any other legally enforceable agreement or mechanism that assigns responsibility for the maintenance of treatment measures.

iii. O&M Reporting: the Permittees shall report on their O&M Program in each Annual Report, starting with the Annual Report to be submitted September 2005. The Annual Report shall contain a description of the organizational structure of the Permittee's O&M Program; an evaluation of that O&M Program's effectiveness; summary of any planned improvements in O&M Program; and a list or summary of treatment measures that have been inspected that year with inspection results.

iv. The Program shall submit by June 1, 2004, a vector control plan for Executive Officer approval, after consultation with the appropriate vector control agencies. The plan shall include design guidance for treatment measures to prevent the production of vectors, particularly mosquitoes, and provide guidance on including vector abatement concerns in O&M and verification inspection activities.

v. The Permittees are expected to work diligently and in good faith with the appropriate state and federal agencies to obtain any approvals necessary to complete maintenance activities for stormwater treatment measures. If the Permittees have done so, and maintenance approvals are not granted, where necessary, the Permittees shall be deemed by the Regional Board to be in compliance with this Provision.

f. Limitation on Increase of Peak Stormwater Runoff Discharge Rates

i. The Permittees shall manage increases in peak runoff flow and increased runoff volume, for all Group 1 Projects where such increased flow and/or volume is likely to cause increased erosion of creek beds and banks, silt pollutant generation, or other impacts to beneficial uses. Such management shall be through implementation of a Hydrograph Modification Management Plan (HMP). The HMP, once approved by the Regional Board, shall be implemented so that post-project runoff shall not exceed estimated pre-project rates and/or durations, where the increased stormwater discharge rates and/or durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses, attributable to changes in the amount and timing of runoff. The term duration in this Provision is defined as the period that flows are above a threshold that causes significant sediment transport and may cause excessive erosion damage to creeks and streams.

ii. Provision C.3.f.i does not apply to new development and significant redevelopment projects where the project discharges stormwater runoff into creeks or storm drains where the potential for erosion or other impacts to beneficial uses, is minimal. Such situations may include discharges into creeks that are concrete-lined or significantly hardened (e.g., with

rip-rap, sackrete, etc.) downstream to their outfall in San Francisco Bay, underground storm drains discharging to the Bay, and construction of infill projects in highly developed watersheds, where the potential for single-project and/or cumulative impacts is minimal. Guidelines for identification of such situations shall be included as a part of the HMP. However, plans to restore a creek reach may re-introduce the applicability of HMP controls, and would need to be addressed in the HMP.

iii. The HMP may identify conditions under which some increases in runoff may not have a potential for increased erosion or other impacts to beneficial uses. Reduced controls or no controls on peak stormwater runoff discharge rates and/or durations may be appropriate in those cases, subject to the conditions in the HMP. In the absence of information demonstrating that changes in post-development runoff discharge rates and durations will not result in increased potential for erosion or other adverse impacts to beneficial uses, the HMP requirements shall apply.

iv. The HMP proposal, at a minimum, shall include:

1. A review of pertinent literature;
2. A protocol to evaluate potential hydrograph change impacts to downstream watercourses from proposed projects;
3. An identification of the rainfall event below which these standards and management requirements apply, or range of rainfall events to which these requirements apply;
4. A description of how the Permittees will incorporate these requirements into their local approval processes, or the equivalent; and,
5. Guidance on management practices and measures to address identified impacts.

The Permittees may prioritize which individual watersheds the HMP would initially apply to, if it were demonstrated in the HMP that such prioritization is appropriate.

The Permittees may work appropriately with the Santa Clara Valley Urban Runoff Pollution Prevention Program and/or other Bay Area stormwater programs as part of completing these requirements. For example, the Permittees may wish to expand on the literature review being completed by the Santa Clara Valley Urban Runoff Program under its permit, rather than authoring their own literature review from scratch. While such cooperation is encouraged, it shall not be grounds for delaying compliance beyond the schedule set forth herein.

v. The identified maximum rainfall event or rainfall event range may be different for specific watersheds, streams, or stream reaches. Individual Permittees may utilize the protocol to determine a site- or area-specific rainfall event or event range standard.

vi. The HMP's evaluation protocols, management measures, and other information may include the following:

1. Evaluation of the cumulative impacts of urbanization of a watershed on stormwater discharge and stream morphology in the watershed;
2. Evaluation of stream form and condition, including slope, discharge, vegetation, underlying geology, and other information, as appropriate;
3. Implementation of measures to minimize impervious surfaces and directly connected impervious area in new development and redevelopment projects;
4. Implementation of measures including stormwater detention, retention, and infiltration;

5. Implementation of land use planning measures (e.g., stream buffers and stream restoration activities, including restoration-in-advance of floodplains so that floodplains will be able to handle the anticipated increased flows, revegetation, use of less-impacting facilities at the point(s) of discharge, etc.) to allow expected changes in stream channel cross sections, stream vegetation, and discharge rates, velocities, and/or durations without adverse impacts to stream beneficial uses;

6. A mechanism for pre- vs. post-project assessment to determine the effectiveness of the HMP and to allow amendment of the HMP, as appropriate; and,

7. Other measures, as appropriate.

vii. Equivalent limitation of peak flow impacts: The Permittees may develop an equivalent limitation protocol, as part of the HMP, to address impacts from changes in the volumes, velocities, and/or durations of peak flows through measures other than control of those volumes and/or durations. The protocol may allow increases in peak flow and/or durations, subject to the implementation of specified design, source control, and/or treatment control measures and land planning practices that take into account expected stream change (e.g., increases in the cross-sectional area of stream channel) resulting from changes in discharge rates and/or durations, while maintaining or improving beneficial uses of waters.

viii. The Permittees as a group shall complete the HMP according to the schedule below. All required documents shall be submitted for approval by the Executive Officer, based on the criteria set forth in this Order, except the HMP, which shall be submitted for approval by the Regional Board. Development and implementation status shall be reported in the Permittees' Annual Reports, which shall also provide a summary of projects incorporating measures to address this Provision and the measures used.

1. February 15, 2004: Submit a detailed workplan and schedule for completion of the literature review, development of a protocol to identify an appropriate limiting storm, development of guidance materials, and other required information;

2. February 15, 2004: Submit literature review;

3. November 15, 2004: Submit a draft HMP, including the analysis that identifies the appropriate limiting storm and the identified limiting storm event(s) or event range(s);

4. May 15, 2005: Submit the HMP for Regional Board approval; and,

5. Upon approval by the Regional Board, implement the approved HMP, which shall include the requirements of this Provision. Prior to approval of the HMP by the Regional Board, the early implementation of measures likely to be included in the HMP shall be encouraged by the Permittees.

g. Alternative Compliance Based on Impracticability and Requiring Compensatory Mitigation

i. The Permittees may establish a program under which a project proponent may request alternative compliance with the requirement in Provision C.3.c. to install treatment measures onsite for a given project, upon an appropriate showing of impracticability, and with a provision to treat offsite an equivalent surface area, pollutant loading or quantity of stormwater runoff, or provide other equivalent water quality benefit, such as stream restoration or other activities that limit or mitigate impacts from excessive erosion or sedimentation. The offsite location of this equivalent stormwater treatment, or water quality

benefit, shall be where no other requirement in Provision C.3.c for treatment exists, and within the same stormwater runoff drainage basin and treating runoff discharging to the same receiving water, where feasible. Under this Provision, enhancements of existing mitigation projects are acceptable. The Permittees should specifically define the basis for impracticability or infeasibility, which may include situations where onsite treatment is technically feasible, but excessively costly, as determined by set criteria.

ii. Regional Solutions: The alternative compliance may allow a project proponent to participate in a regional or watershed-based stormwater treatment facility, without a showing of impracticability at the individual project site, if the regional or watershed- based stormwater treatment facility discharges into the same receiving water, where feasible.

iii. The Program is encouraged to propose a model alternative compliance program on behalf of the Permittees, for approval by the Regional Board, and for potential adoption and implementation by the Permittees.

iv. The alternative compliance program proposal should state the criteria for granting alternatives from the requirement to install treatment measures onsite; criteria for determining impracticability or infeasibility; and criteria for use of regional or watershed-based stormwater treatment facilities. The proposal should also describe how the project sponsor will provide equivalent water quality benefits or credit to an alternative project or to a regional or watershed treatment facility and tracking mechanisms to support the reporting requirements set forth in Provision C.3.g.vi below.

v. An exemption without the requirement for alternate, equivalent offsite treatment is allowed for the following redevelopment projects after impracticability of including onsite treatment measures is established, where such projects are built as redevelopment projects as defined in Finding 14, and it is clearly demonstrated that cost of participation in alternate, equivalent offsite treatment through a regional treatment or other equivalent water quality benefit project fund will unduly burden the project: creation of housing units affordable to persons of low or moderate income as defined by Health and Safety Code Section 50093, brownfield sites, and/or transit village type developments within 1/4 mile of transit stations and/or intermodal facilities.

vi. Reporting: Each year, as part of its Annual Report, each Permittee shall provide a list of alternative projects and exemptions it granted. For each project and exemption, the following information shall be provided:

1. Name and location of the project for which the alternative project or exemption was granted;
2. Project type (e.g., restaurant, residence, shopping center) and size;
3. Area or percent of impervious surface in the project's final design;
4. Reason for granting the alternative project or exemption, including, for those projects granted an exemption without the requirement for alternate, equivalent offsite treatment, a demonstration that cost of such equivalent offsite treatment unduly burdened the project;
5. Terms of the alternative project or exemption; and,
6. The offsite stormwater treatment project receiving the benefit, and the date of completion of the project.

vii. Interim Alternative Compliance Program: In the event that an alternative compliance program has not been proposed by the Program and/or a Permittee, approved by the Regional

Board, or implemented by a particular Permittee by the date of implementation of Group 1 Projects, provision for an interim alternative to the requirement to install treatment measures onsite may be granted by a Permittee. An interim alternative compliance project may be granted if the project proponent (1) demonstrates onsite impracticability due to extreme limitations of space for treatment and lack of below grade surface treatment options, and (2) presents sufficient assurance of providing equivalent offsite stormwater pollutant and/or volume treatment at another location within the drainage basin, for which construction of stormwater treatment measures is not otherwise required, discharging into the same receiving water, where feasible. The Permittee shall be responsible for assuring that equivalent offsite treatment has occurred for any use of this interim alternative compliance, within six months of project construction, and shall report the basis of onsite impracticability and the nature of equivalent offsite treatment for each project in its Annual Report. Any equivalent offsite treatment that does not include construction of stormwater treatment measures must be approved by the Executive Officer, based on the criteria set forth in this Order. This interim alternative compliance clause will be void when Regional Board approves the alternative compliance program described in Provision C3.g.i-iv, above.

h. Alternative Certification of Adherence to Design Criteria for Stormwater Treatment Measures

In lieu of conducting detailed review to verify the adequacy of measures required pursuant to Provisions C.3.d, a Permittee may elect to accept a signed certification from a Civil Engineer or a Licensed Architect or Landscape Architect registered in the State of California, or another Permittee that has overlapping jurisdictional project permitting authority, that the plan meets the criteria established herein. The Permittee should verify that each certifying person has been trained on treatment measure design for water quality not more than three years prior to the signature date, and that each certifying person understands the groundwater protection principles applicable to the project site (see Provision C.3.i: Limitations on Use of Infiltration Treatment Measures). Training conducted by an organization with stormwater treatment measure design expertise (e.g., a university, American Society of Civil Engineers, American Society of Landscape Architects, American Public Works Association, or the California Water Environment Association) may be considered qualifying.

i. Limitations on Use of Infiltration Treatment Measures - Infiltration and Groundwater Protection

In order to protect groundwater from pollutants that may be present in urban runoff, treatment measures that function primarily as infiltration devices (such as infiltration basins and infiltration trenches not deeper than their maximum width) shall meet, at a minimum, the following conditions:

i. Pollution prevention and source control measures shall be implemented at a level appropriate to protect groundwater quality at sites where infiltration devices are to be used;

ii. Use of infiltration devices shall not cause or contribute to degradation of groundwater water quality objectives;

iii. Infiltration devices shall be adequately maintained to maximize pollutant removal capabilities;

iv. The vertical distance from the base of any infiltration device to the seasonal high groundwater mark shall be at least 10 feet. Note that some locations within the Permittees'

jurisdiction are characterized by highly porous soils and/or a high groundwater table; in these areas treatment measure approvals should be subject to a higher level of analysis (e.g., considering the potential for pollutants such as on-site chemical use, the level of pretreatment to be achieved, and similar factors);

v. Unless stormwater is first treated by a means other than infiltration, infiltration devices shall not be recommended as treatment measures for areas of industrial or light industrial activity; areas subject to high vehicular traffic (25,000 or greater average daily traffic on main roadway or 15,000 or more average daily traffic on any intersecting roadway); automotive repair shops; car washes; fleet storage areas (bus, truck, etc.); nurseries; and other high threat to water quality land uses and activities as designated by each Permittee; and,

vi. Infiltration devices shall be located a minimum of 100 feet horizontally from any water supply wells.

j. Site Design Measures Guidance and Standards Development

i. The Permittees shall review their local design standards and guidance for opportunities to make revisions that would result in reduced impacts to water quality and beneficial uses of waters. In this event, the Permittees shall make any such revisions and implement the updated standards and guidance, as necessary.

Areas of site design that may be appropriate to address include the following, which are offered as examples:

1. Minimize land disturbance;
2. Minimize impervious surfaces (e.g., roadway width, driveway area, and parking lot area), especially directly connected impervious areas;
3. Minimum-impact street design standards for new development and redevelopment, including typical specifications (e.g., neo-traditional street design standards and/or street standards recently revised in other cities, including Portland, Oregon, and Vancouver, British Columbia);
4. Minimum-impact parking lot design standards, including parking space maximization within a given area, use of landscaping as a stormwater drainage feature, use of pervious pavements, and parking maxima;
5. Clustering of structures and pavement;
6. Typical specifications or “acceptable design” guidelines for lot-level design measures, including:
   - Disconnected roof downspouts to splash blocks or “bubble-ups;”
   - Alternate driveway standards (e.g., wheelways, unit pavers, or other pervious pavements); and,
   - Microdetention, including landscape detention and use of cisterns (may also be considered treatment measures);
7. Preservation of high-quality open space;
8. Maintenance and/or restoration of riparian areas and wetlands as project amenities, including establishing vegetated buffer zones to reduce runoff into waterways, allow for stream channel change as a stream’s contributing watershed urbanizes, and otherwise

mitigate the effects of urban runoff on waters and beneficial uses of waters (may also be considered treatment measures); and,

9. Incorporation of supplemental controls to minimize changes in the volume, flow rate, timing, and duration of runoff, for a given precipitation event or events. These changes include cumulative hydromodification caused by site development. Measures may include landscape-based measures or other features to reduce the velocity of, detain, and/or infiltrate stormwater runoff (may also be considered treatment measures).

ii. The standards and guidance review shall be completed according to the schedule below. A summary of review, revision, and implementation status shall be submitted for acceptance by the Executive Officer and reported in the Permittees' Annual Reports, beginning with the Annual Report due September 15, 2005.

1. No later than August 15, 2003: The Permittees shall submit a detailed workplan and schedule for completion of the review of standards and guidelines, any proposed revisions thereto and any implementation of revised standards and guidance;

2. No later than November 15, 2004: The Permittees shall submit a draft review and analysis of local standards and guidance, opportunities for revision, and any proposed revised standards and guidance; and,

3. No later than November 15, 2005: The Permittees shall incorporate any revised standards and guidance into their local approval processes and shall fully implement the revised standards and guidance.

k. Source Control Measures Guidance Development

The Permittees shall, as part of their improvement process, submit enhanced new development and significant redevelopment Performance Standards, which summarize source control requirements for such projects to limit pollutant generation, discharge, and runoff, to the maximum extent practicable. Examples of source control measures may include the following, which are offered as examples:

i. Indoor mat/equipment wash racks for restaurants, or covered outdoor wash racks plumbed to the sanitary sewer;

ii. Covered trash and food compactor enclosures with a sanitary sewer connection for dumpster drips and designed such that run-on to trash enclosure areas is avoided;

iii. Sanitary sewer drains for swimming pools;

iv. Sanitary drained outdoor covered wash areas for vehicles, equipment, and accessories;

v. Sanitary sewer drain connections to take fire sprinkler test water;

vi. Storm drain system stenciling;

vii. Landscaping that minimizes irrigation and runoff, promotes surface infiltration where appropriate, minimizes the use of pesticides and fertilizers, and where feasible removes pollutants from stormwater runoff; and,

viii. Appropriate covers, drains, and storage precautions for outdoor material storage areas, loading docks, repair/maintenance bays, and fueling areas.

A model enhanced new development and significant redevelopment source control Performance Standard and proposed workplan for its implementation shall be submitted by August 15, 2004. Implementation shall begin no later than February 15, 2005, and the status shall thereafter be reported in the Permittees' Annual Reports beginning with the Annual Report due September 15, 2005, which shall also provide appropriate detail on projects reflecting the application of the enhanced Performance Standards consistent with Provision C.3.b, above.

l. Update General Plans

At the next scheduled update/revision of its General Plan, each Permittee shall confirm that it has incorporated water quality and watershed protection principles and policies into its General Plan or equivalent plan, to the extent necessary, to require implementation of the measures required by Provision C.3 for applicable development projects. These principles and policies shall be designed to protect natural water bodies, reduce impervious land coverage, slow runoff, and where feasible, maximize opportunities for infiltration of rainwater into soil. Such water quality and watershed protection principles and policies may include the following, which are offered as examples:

i. Minimize the amount of impervious surfaces and directly connected impervious surfaces in areas of new development and redevelopment and where feasible maximize on-site infiltration of runoff;

ii. Implement pollution prevention methods supplemented by pollutant source controls and treatment. Use small collection strategies located at, or as close as possible to, the source (i.e., the point where water initially meets the ground) to minimize the transport of urban runoff and pollutants offsite and into a municipal separate storm sewer system;

iii. Preserve, and where possible, create or restore areas that provide important water quality benefits, such as riparian corridors, wetlands, and buffer zones. Encourage land acquisition and/or conservation easement acquisition of such areas;

iv. Limit disturbances of natural water bodies and natural drainage systems caused by development including roads, highways, and bridges;

v. Prior to making land use decisions, utilize methods available to estimate increases in pollutant loads and flows resulting from projected future development. Require incorporation of structural and non-structural treatment measures to mitigate the projected increases in pollutant loads and flows;

vi. Avoid development of areas that are particularly susceptible to erosion and sediment loss; or establish development guidance that identifies these areas and protects them from erosion and sediment loss; and,

vii. Reduce pollutants associated with vehicles and increased traffic resulting from development.

If amendments of General Plans are determined to be legally necessary to allow for implementation of any aspect of Provision C.3, such amendments shall occur by the implementation date of the corresponding component of the Provision. If legally necessary General Plan amendments cannot occur by the implementation date because of CEQA requirements or other constraints imposed by the laws applicable to amending General Plans, the Permittee shall report this to the Executive Officer as soon as possible, and no later than in the Annual Report due more than six months in advance of the implementation date. Should

changes to implementation dates to enable a Permittee to comply with CEQA and General Plan legal requirements be necessary, the Permittee shall recommend a new implementation date for approval by the Regional Board.

m. Water Quality Review Processes

When Permittees conduct environmental review of projects in their jurisdictions, the Permittees shall evaluate water quality effects and identify appropriate mitigation measures. This requirement shall be implemented by May 15, 2004. Questions that evaluate increased pollutants and flows from the proposed project include the following, which are offered as examples:

i. Would the proposed project result in an increase in pollutant discharges to receiving waters? Consider water quality parameters such as temperature, dissolved oxygen, turbidity and other typical stormwater pollutants (e.g., heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment, nutrients, oxygen-demanding substances, and trash).

ii. Would the proposed project result in significant alteration of receiving water quality during or following construction?

iii. Would the proposed project result in increased impervious surfaces and associated increased runoff?

iv. Would the proposed project create a significant adverse environmental impact to drainage patterns due to changes in runoff flow rates or volumes?

v. Would the proposed project result in increased erosion in its watershed?

vi. Is the project tributary to an already impaired water body, as listed on the CWA Section 303(d)? If so, will it result in an increase in any pollutant for which the water body is already impaired?

vii. Would the proposed project have a potentially significant environmental impact on surface water quality, to marine, fresh, or wetland waters?

viii. Would the proposed project have a potentially significant adverse impact on groundwater quality?

ix. Will the proposed project cause or contribute to an exceedance of applicable surface or groundwater receiving water quality objectives or degradation of beneficial uses?

x. Will the project impact aquatic, wetland, or riparian habitat?

n. Reporting, including Pesticide Reduction Measures

The Permittees shall demonstrate compliance with the requirements of Provision C.3 by providing in their Annual Reports the information described in Table 1, beginning with the dates shown in Table 1 and continuing thereafter. In addition, the following information shall be collected for Annual Report submittal, beginning upon the date of adoption of this Order:

i. For all new development and significant redevelopment projects which meet the Group 1 or Group 2 definitions in Provision C.3.c, collect and report the name or other identifier, type of project (using the categories in Provision C.3.c), site acreage or square footage, and square footage of new impervious surface.

ii. For projects that must implement treatment measures, report which treatment measures were used and numeric-sizing criteria employed, the O&M responsibility mechanism including responsible party, site design measures used, and source control measures required. This information shall also be reported to the appropriate local vector control district, with additional information of access provisions for vector control district staff. This reporting shall begin in the Annual Report following the implementation date specified in Provision C.3.c.

iii. A summary of the types of pesticide reduction measures required for those new development and significant redevelopment projects to be addressed under Provision C.3.c, and the percentage of such new development and significant redevelopment projects for which pesticide reduction measures were included. These measures are required under Provision C.10.c, and relate directly to Provision C.3 requirements.

The Permittees may utilize their Annual Reports to highlight their budget constraints and suggest reprioritization of any Program activities in order to achieve the most cost effective overall Program.

o. Implementation Schedule

The Permittees shall implement the requirements of Provisions C.3.b through C.3.n according to the schedule in Table 2.

4. Public Information and Participation Performance Standards

The Program shall develop a specific workplan with the Permittees based on Section 3. Task 5 of the PIP component of the Management Plan to evaluate the effectiveness of the PIP component and report on this on-going evaluation starting September 2004 for the 2003-2004 Annual Report, and annually thereafter. Effectiveness may be measured through direct or indirect means, such as observation of behavior; surveys; and/or analysis of available data on public involvement in or in response to PIP activities.

5. Performance Standards for Municipal Maintenance

The Program shall implement municipal maintenance performance standards as set forth in the Management Plan.

6. Performance Standard for Rural Public Works Maintenance and Support

For the purpose of this provision, rural means any watershed or portion thereof that remains undeveloped or with primarily agricultural, grazing or open space uses, and drains to unchannelized streams. The Program shall develop, within one year after the adoption of this Order, Performance Standards, appropriate training and technical assistance requirements, and annual reporting requirements for the following rural public works maintenance and support activities: a) management and/or removal of large woody debris and live vegetation from stream channels; b) streambank stabilization projects; and, c) road construction, maintenance, and repairs in rural areas to prevent and control road-related erosion. In addition, Permittees shall develop: d) education and guidance on permitting requirements for rural public works activities so as to stress the importance of proper planning and construction.

7. Annual Reports and Workplans

a. Annual Reports

The Permittees shall submit an Annual Report to the Regional Board by September 15 of each year, documenting the status of the Program's and the Permittees' activities during the previous fiscal year, including the results of a qualitative assessment of activities implemented by the Permittees, and the performance of tasks contained in the Management Plan.

The Annual Report shall include a compilation of deliverables and milestones completed during the previous twelve-month period, as described in the Management Plan. In either the Annual Reports or the Workplans, the Permittees shall propose pertinent updates, improvements, or revisions to the Management Plan, which shall be complied with under this Order unless disapproved by the Executive Officer or acted upon in accordance with Provision C.12. As part of the Annual Report process, each Permittee shall evaluate the effectiveness of the activities completed during the reporting period.

Direct and indirect measures of effectiveness may include, but are not limited to, conformance with established Performance Standards, quantitative monitoring to assess the effectiveness of control measures, measurements or estimates of pollutant load reductions, detailed accounting of Program accomplishments, funds expended, or staff hours utilized. Methods to improve effectiveness in the implementation of tasks and activities, including development of new, or modification of existing, Performance Standards, shall be identified through the Program's review and improvement process, where appropriate. The Annual Report information shall be adequate to describe each Permittee's compliance status with respect to the provisions of this Order, and the required actions under the Management Plan and the Annual Workplans.

i. Enhanced Annual Reporting Requirements for Public Information and Participation
The level of implementation of PIP activities shall be reported annually. The Program will report on the implementation of its specific workplan to evaluate effectiveness of the PIP component starting in September 2004 for the 2003-2004 Annual Report, and annually thereafter. This evaluation will be included in the General Program deliverables for General Program activities and in the deliverables by Permittees for activities that were conducted by individual Permittees.

ii. Enhanced Annual Reporting Requirements for Illicit Discharge Controls
The goal of the Illicit Discharge Controls component is to identify and eliminate non-permissible non-stormwater discharges associated with illegal dumping or illicit connections to the storm drain system.

Enhanced annual reporting for this Program component shall, at a minimum, include:

1. Training and coordination of staff most likely to encounter illicit discharges; and

2. Identification and follow-up for all illicit discharges and problem areas identified within each Permittee's jurisdiction, including number of responses to reports of potential impacts to water quality, complaints, spills, and other similar reports. These should be, at a minimum, characterized as to report source, nature of the report, location of the event, reported source of pollutants, and follow-up and investigation, if any. For any actual non-compliance or threatened non-compliance noted during the investigation of the report, the nature of follow-up will be reported, through resolution of the noted issue, up to and including enforcement action.

iii. Enhanced Annual Reporting Requirements for Industrial and Commercial Discharge Controls

The goal of the Industrial and Commercial Discharge Controls component is to reduce or eliminate adverse water quality impacts from activities conducted at any industrial and commercial site within the Permittees' jurisdictions that have a potential for significant urban runoff pollution. Performance measures for this Program component are in the Management Plan.

Frequency of inspection of a given site or category of industry or commercial business with a potential to impact stormwater may vary depending upon known or anticipated threats to water quality, but should not be less frequent than once in five years. Inspection frequency can be reduced for sites that demonstrate a history of compliance or exhibit little threat to water quality, and increased for sites that demonstrate non-compliance, or exhibit significant threat to water quality.

Permittees shall report a summary of inspection activity for any non-compliance noted during an inspection, the nature of follow-up through resolution of the noted issue, up to and including enforcement action.

b. Annual Workplans and Updates

By 100 days from the adoption of this order and on March 1st of each year thereafter,, the Permittees shall submit draft Workplans and Updates that describe the proposed implementation of the Management Plan for the next fiscal year in areas described below.

The Workplans and Updates shall consider the status of implementation of current year activities and actions of the Permittees, problems encountered, and proposed solutions, and shall address any comments received from the Executive Officer on the previous year's Annual Report. The Workplans and Updates shall include clearly defined tasks, responsibilities, and schedules for implementation of Program and Permittee actions for the next fiscal year.

The Workplans and Updates shall be deemed to be final and incorporated into the Management Plan and this Order as of June 1 unless previously determined to be unacceptable by the Executive Officer. The Permittees shall address any comments or conditions of acceptability received from the Executive Officer on their draft Workplans and Updates prior to the submission of their Annual Report on September 15, at which time the modified Workplans and Updates shall be deemed to be incorporated into the Management Plan and this Order unless disapproved of by the Executive Officer.

i. Performance Standards and Monitoring Plan Updates

Any proposal for development of new, or modification of existing, Performance Standards in accordance with Provision C.2.b, as well as alternative monitoring activities as required in Provision C.8, shall be reported in the workplans.

ii. Public Information and Participation

By 100 days from the adoption of this order, the Program shall submit a specific workplan to evaluate the effectiveness of the PIP component.

iii. Industrial and Commercial Discharge Controls Program

Each Permittee, except the Alameda County Flood Control and Water Conservation District and Zone 7 of the Alameda County Flood Control District, shall submit an annual update to

its five-year Industrial and Commercial Business Inspection Plan (Inspection Plan) with the following information:

1. Estimated number of facilities to be inspected listed by type of business or geographical sector as outlined in the Inspection Plan; and,
2. Estimated number of high priority facilities to be inspected on a yearly basis based on priorities described in Inspection Plan.

The range of industrial and commercial businesses that will require regular inspection is not limited to those industrial sites that are required to obtain coverage under the State Board's Industrial Stormwater NPDES General Permit.

c. One-time Reports and Five-Year Inspection and Illicit Discharge Control Action Plans

In addition to Annual Reports and Annual Updates, the Permittees shall provide the following information by 100 days of adoption of this order:

i. Illicit Discharge Controls

Each Permittee will develop a five-year Illicit Discharge Control Action Plan to reduce, control and/or otherwise address sources of discharge. Performance measures for this program area are in the Management Plan.

Permittees shall describe the specific procedures they use to follow-up on non-compliance.

Permittees shall identify an alternate publicized number to report illicit discharges in addition to 911.

Proposed changes to the five-year Illicit Discharge Control Action Plan shall be submitted annually through subsequent workplans.

ii. Industrial and Commercial Discharge Controls Program

Each Permittee, except the Alameda County Flood Control and Water Conservation District and Zone 7 of the Alameda County Flood Control District, shall submit a five-year Industrial and Commercial Business Inspection Plan (Inspection Plan) containing the following information:

1. Estimate of total number of Industrial and Commercial sites requiring inspection, within each Permittee's jurisdiction, for the five-year period;
2. A list of types of business within the Permittee's jurisdiction with an estimate of the number of businesses in each category;
3. A description of the process for prioritizing inspections and rationale for inspecting a business or business type more frequently or before another business or business type. Each Permittee will explain criteria used for designating a business as high priority. If any geographical areas are to be targeted for yearly inspections because of their high potential for stormwater pollution, these areas should be indicated in the Inspection Plan, with optional maps indicating priority zoning, if any, in each Permittees' jurisdiction;
4. A description of Permittee's procedures for follow-up inspections, enforcement actions or referral to another agency, including appropriate time periods of action; and,
5. An Annual Update detailing inspection activities for the next fiscal year shall be due by March 1 of the year following the submission of each Annual Report. The Annual Update shall be subject to the due dates and Executive Officer approvals stated in Provision C.7.b and reporting requirements further listed in Provision C.7.b.iii.

Each Permittee shall also submit a description of a data management system that the Permittee maintains to track changes in industrial and commercial sites, as well as inspection and enforcement activity of these sites.

8. **Monitoring Program**

a. The Permittees shall implement a Monitoring Program that supports the development and implementation and demonstrates the effectiveness of the Management Plan and related work conducted by the Program among other goals. The Monitoring Program shall be a multi-year receiving waters monitoring plan designed to achieve the following objectives:

- Characterization of representative drainage areas and stormwater discharges, including land-use characteristics pollutant concentrations and mass loadings;
- Assessment of existing or potential adverse impacts on beneficial uses caused by pollutants of concern in stormwater discharges, including an evaluation of representative receiving waters;
- Identification of potential sources of pollutants of concern found in stormwater discharges; and,
- Evaluation of effectiveness of representative stormwater pollution prevention or control measures.

The Monitoring Program shall include the following:

i. Provision for conducting and reporting the results of special studies conducted by the Permittees which are designed to determine effectiveness of BMPs or control measures, define a Performance Standard or assess the adverse impacts of a pollutant or pollutants on beneficial uses.

ii. Provisions for conducting watershed monitoring activities including: identification of major sources of pollutants of concern; evaluation of the effectiveness of control measures and BMPs; and use of physical, chemical and biological parameters and indicators as appropriate.

iii. Identification and justification of representative sampling locations, frequencies and methods, suite of pollutants to be analyzed, analytical methods, and quality assurance procedures. Alternative monitoring methods in place of these (special projects, financial participation in regional, state, or national special projects or research, literature review, visual observations, use of indicator parameters, recognition and reliance on special studies conducted by other programs, etc.) may be proposed with justification.

b. Multi-Year Monitoring and Assessment Plan. In conjunction with the submissions required by Provision C.10, the Permittees shall submit, by 100 days of adoption of this order, a multi-year monitoring plan, acceptable to the Executive Officer, designed to comply with these Monitoring Program requirements. The monitoring and assessment plan shall include provisions for monitoring Central and South/Lower San Francisco Bay by participating in the San Francisco Estuary Regional Monitoring Program for Trace Substances or an acceptable alternative monitoring program.

c. Annual Monitoring Program Plan. The Permittees shall submit, by 100 days from the adoption of this order and on March 1st of each year thereafter, an annual monitoring program plan, acceptable to the Executive Officer, that includes clearly defined tasks, responsibilities, and

schedules for implementation of monitoring activities for the next fiscal year designed to comply with these Monitoring Program requirements.

9. Non-Stormwater Discharges

a. Exempted Discharges

In carrying out Prohibition A of this Order, the following non-stormwater discharges are not prohibited unless they are identified by the Permittees or the Executive Officer as sources of pollutants to receiving waters:

i. Flows from riparian habitats or wetlands;
ii. Diverted stream flows;
iii. Springs;
iv. Rising ground waters; and
v. Uncontaminated groundwater infiltration.

If any of the above categories of discharges, or sources of such discharges, are identified as sources of pollutants to receiving waters, then such categories or sources shall be addressed as conditionally exempted discharges in accordance with Provision C.9.b.

b. Conditionally Exempted Discharges

The Program has developed control measures to eliminate adverse impacts of certain conditionally exempted discharges as listed in the Findings (uncontaminated pumped groundwater, foundation drains, water from crawl spaces pumps, footing drains and planned and unplanned discharges from potable water sources, and water line and hydrant flushing). The following non-stormwater discharges are not prohibited if they are identified by either the Permittees (and incorporated into the Management Plan) or the Executive Officer as not being sources of pollutants to receiving waters or if appropriate control measures to prevent or eliminate adverse impacts of such sources are developed and implemented under the Management Plan in accordance with Provision C.9.c:

i. Uncontaminated pumped groundwater;
ii. Foundation drains;
iii. Water from crawl space pumps;
iv. Footing drains;
v. Air conditioning condensate;
vi. Irrigation water;
vii. Landscape irrigation;
viii. Lawn or garden watering;
ix. Planned and unplanned discharges from potable water sources;
x. Water line and hydrant flushing;
xi. Individual residential car washing; and
xii. Discharges or flows from emergency fire fighting activities;

The Permittees shall identify and describe the categories of discharges listed in Provision C.9.b that they wish to exempt from Prohibition A in periodic submissions to the Executive Officer. For each such category, the Permittees shall identify and describe as necessary and appropriate to the category either documentation that the discharges are not sources of pollutants to receiving waters or circumstances in which they are not found to be sources of pollutants to receiving waters. Otherwise, the Permittees shall describe control measures to eliminate adverse impacts

of such sources, procedures and Performance Standards for their implementation, procedures for notifying the Regional Board of these discharges, and procedures for monitoring and record management. Permittees shall resubmit appropriate revised and/or additional control measures whenever there is a change in the quality of the discharge. For example, the use of recycled water for irrigation shall lead to the implementation of additional control measures in order to reduce chlorine levels before releasing the discharge to the storm drain system. Such submissions shall be deemed to be incorporated into the Management Plan unless disapproved by the Executive Officer or acted on in accordance with Provision C.12 and the NPDES permit regulations.

c. Permit Authorization for Exempted Discharges

i. Discharges of non-stormwater from sources owned or operated by the Permittees are authorized and permitted by this Order, if they are in accordance with the conditions of this Provision and the Management Plan.

ii. The Regional Board may require dischargers of non-stormwater other than the Permittees to apply for and obtain coverage under an NPDES permit and comply with the control measures developed by the Permittees pursuant to this Provision. Non-stormwater discharges that are in compliance with such control measures may be accepted by the Permittees and are not subject to Prohibition A.

iii. The Permittees may propose, as part of their annual updates to the Management Plan under Provision C.7 of this Order, additional categories of non-stormwater discharges to be included in the exemption to Prohibition A. Such proposals are subject to approval by the Regional Board in accordance with the NPDES permit regulations.

10. Water Quality-Based Requirements for Specific Pollutants of Concern

In accordance with Provision C.1 and Finding 22 of this Order, the Permittees shall implement control programs for pollutants that have the reasonable potential to cause or contribute to exceedances of water quality standards. These control programs shall include the following:

a. Control Program for Copper

The Permittees have submitted a Copper Pollutant Reduction Plan (PRP) that includes a general strategy to monitor the concentration of copper in stormwater runoff and lists BMPs that may be used to reduce copper discharges. The program will further refine the Copper PRP by providing detailed descriptions of activities in each fiscal year. The refined PRP shall be included in the Program's submittal of the Annual Workplan by 100 days of adoption of this Order, and evaluations and results shall be reported in the Annual Reports.

b. Control Program for Mercury

The Mercury Pollutant Reduction Plan (Mercury Plan) shall be refined to include all of the following:

i. Development and adoption of policies, procedures, and/or ordinances calling for:

- The reduction of mercury from controllable sources in urban runoff to the maximum extent practicable, including the identification of mercury-containing products used by the Permittees and a schedule for their timely phase out where appropriate; and

- Coordination with solid waste management agencies to ensure maximum recycling of fluorescent lights and/or establishment of "take back" programs for the public collection of mercury-containing household products (potentially including thermometers and other gauges, batteries, fluorescent and other lamps, switches, relays, sensors and thermostats);

ii. A schedule for assisting the Regional Board staff in conducting an assessment of the contribution of air pollution sources to mercury in the Permittees' urban runoff (potentially including an identification of significant mercury air emission sources, an inventory of relevant mercury air emissions and a review of options for reducing or eliminating mercury air emissions);

iii. Assessment of the sediment mercury concentrations and percentage of fine material at the base of key watersheds, above the tide line;

iv. A public education, outreach and participation program designed to reach residential, commercial and industrial users or sources of mercury-containing products or emissions; and,

v. Participation with other organizations to encourage the electric light bulb manufacturing industry to reduce mercury associated with the disposal of fluorescent lights through product reformulation.

The Mercury Plan shall be refined and incorporated in the Program's submittal of the Annual Workplan by 100 days of adoption of this order. The Mercury Plan shall refine the schedule for implementation that Permittees are currently working under. To facilitate the development of the actions specified above, the Permittees may coordinate with publicly owned treatment works and other agencies to develop cooperative plans and programs.

c. Control Program for Pesticides

To address the impairment of urban streams by diazinon and other pesticides, the Permittees shall continue to implement and refine the previously submitted Diazinon Pollutant Reduction Plan (Pesticide Plan) to address their own use of pesticides including diazinon, other lower priority pesticides no longer in use such as chlordane, dieldrin and DDT, and the use of such pesticides by other sources within their jurisdictions. The Permittees may coordinate with agencies and organizations such as the Bay Area Stormwater Management Agencies Association or the Urban Pesticide Committee. The Pesticide Plan shall include a schedule for implementation and a mechanism for reviewing and amending the plan, as necessary, in subsequent years. The refined Pesticide Plan shall be resubmitted for approval to the Executive Officer by 100 days of adoption of this order.

i. Pesticide Use by Permittees

The Pesticide Plan shall include a program to quantitatively identify each Permittee's pesticide use by preparing a periodically updated inventory of pesticides used by all internal departments, divisions, and other operational units as applicable to each Permittee. Schools and special district operations shall be included in the Pesticide Plan to the full extent of each Permittee's authority. The Permittees shall adopt and verifiably implement policies, procedures, and/or ordinances requiring the minimization of pesticide use and the use of integrated pest management (IPM) techniques in the Permittees' operations if they have not already done so. The policies, procedures, and/or ordinances shall include: 1) commitments to reduce use, phase-out, and ultimately eliminate use of pesticides that cause impairment of surface waters, and 2) commitments to not increase the Permittees' use of organophosphate

pesticides without justifying the necessity and minimizing adverse water quality impacts. The Permittees shall implement training programs for their employees who use pesticides, including pesticides available over the counter. These programs shall address pesticide-related surface water toxicity, proper use and disposal of such pesticides, and least toxic methods of pest prevention and control, including IPM. The Pesticide Plan shall be subject to updating via the Permittees' improvement process.

ii. Other Pesticide Sources

To address other pesticide users within the Permittees' jurisdictions (including schools and special district operations that are not owned or operated by the Permittees), the Pesticide Plan shall include the following elements:

1. Public education and outreach programs. Such programs shall be designed for residential and commercial pesticide users and pest control operators. These programs shall provide targeted information concerning proper pesticide use and disposal, potential adverse impacts on water quality, and alternative, least toxic methods of pest prevention and control, including IPM. These programs shall also target pesticide retailers to encourage the sale of least toxic alternatives and to facilitate point-of-sale public outreach efforts. These programs may also recognize local least toxic pest management practitioners.
2. Mechanisms to discourage pesticide use at new development sites. Such mechanisms shall encourage the consideration of pest-resistant landscaping and design features, minimization of impervious surfaces, and incorporation of stormwater detention and retention techniques in the design, landscaping, and/or environmental reviews of proposed development projects. Education programs shall target individuals responsible for these reviews and focus on factors affecting water quality impairment.
3. Coordination with household hazardous waste collection agencies. The Permittees shall support, enhance, and help publicize programs for proper pesticide disposal.

iii. Other Pesticide Activities

The Permittees shall work with municipal stormwater management agencies in the Bay Area and other parties with interest in or responsibilities for reducing pesticide-related toxicity in surface water (for example, with the Urban Pesticide Committee) to assess which pesticide products, uses and past uses pose the greatest risks to surface water quality. Along with incorporating this information into the programs described above, the Permittees shall encourage US EPA, the California Department of Pesticide Regulation (DPR), and pesticide manufacturers to understand the adverse impacts of pesticides on urban creeks, monitor US EPA and DPR activities related to the registration of diazinon products and uses, and actively encourage US EPA, DPR, and pesticide manufacturers to eliminate, reformulate, or otherwise curtail, to the extent possible, the sale and use of pesticides that pose substantial risks to surface water quality (e.g., when there is a high potential for runoff).

The Program shall also work with the Regional Board and other agencies in developing a TMDL for diazinon in impaired urban creeks. The Program will participate in stakeholder forums and collaborative technical studies necessary to assist the Regional Board in completing the TMDL. These studies may include, but shall not be limited to, additional diazinon monitoring and toxicity testing.

d. Control Program for Polychlorinated Biphenyls (PCBs) and Dioxin Compounds

The Permittees shall work with other municipal stormwater management agencies in the Bay Area to implement a plan to identify, assess, and manage controllable sources of PCBs and dioxin-like compounds found in urban runoff (PCBs/Dioxin Plan). The PCBs/Dioxin Plan shall include actions to:

i. Characterize the representative distribution of PCBs and dioxin-like compounds in the urban areas of Alameda County to determine: a) what concentrations and what types of PCBs and dioxin-like compounds are present in urban runoff, b) how such PCBs or dioxin-like compounds are distributed in urban areas, and c) whether storm drains or other surface drainage pathways are sources of PCBs or dioxin-like compounds in themselves, or whether there are specific locations within urban watersheds where prior or current uses result in land sources contributing to discharges of PCBs or dioxin-like compounds to San Francisco Bay via urban runoff conveyance systems;

ii. Provide information to allow calculation of PCBs and dioxin-like compound loads to San Francisco Bay from urban runoff conveyance systems;

iii. Identify control measures and/or management practices to eliminate or reduce discharges of PCBs or dioxin-like compounds conveyed by urban runoff conveyance systems in Alameda County;

iv. Implement actions to eliminate or reduce discharges of PCBs or dioxin-like compounds from urban runoff conveyance systems from controllable sources (if any); and,

v. Develop a long-term management plan for eliminating and reducing PCB discharges.

vi. Action Plan: The PCBs/Dioxin Plan shall describe specific steps to be taken by the Permittees for implementing any emission reduction strategies to the MEP standard. The Plan shall note the specific actions to be taken, identify the agency(ies) responsible for implementation, and include a timeline for the completion of each action item. The portion of the PCB/Dioxin Plan addressing action areas d.i and d.ii shall be implemented forthwith for PCBs. The workplan that was submitted for PCBs addressing action areas d.i, d.ii, and d.iii, including a schedule for implementation, shall be refined and submitted, acceptable to the Executive Officer, by June 1, 2003. A workplan addressing areas d.i and d.ii for dioxin-like compounds shall be submitted, acceptable to the Executive Officer, by March 1, 2004. The portion of the PCB/Dioxin Plan addressing action area d.iv, including a schedule for implementation, shall be submitted, acceptable to the Executive Officer, within one year after adoption of this Order for PCBs and within eighteen months after adoption of this Order for dioxin-like compounds; implementation shall begin no later than one year and six months after adoption of this Order for PCBs and two years after adoption of this Order for dioxin-like compounds, although implementation of early action priorities should take place before that date. The Permittees may coordinate with other stormwater programs and/or other organizations to implement cooperative plans and programs to facilitate implementation of the specified actions.

e. Control Program for Sediment

The Permittees shall conduct an analysis of excess sediment impairment in urban streams and assess management practices that are currently being implemented and additional management practices that will be implemented to prevent or reduce excess sediment impairment in urban creeks, and implement any additional management practices necessary to prevent or reduce excess sediment impairment in urban creeks.

11. Watershed Management

The Permittees shall implement watershed management measures based on identification of relevant watershed characteristics (land imperviousness, conditions of creeks, land uses, etc.) and identification of control measures and other actions in the Management Plan that are appropriately implemented on a watershed basis with the recognition that there may be unique values, problems, goals, and strategies specific to individual watersheds. Watershed management measures also seek to develop and implement the most cost effective approaches to solving identified problems and to coordinate these activities with other related programs.

a. The Permittees shall submit to the Regional Board, within a year after adoption of this Order, a report concerning the integration of watershed management activities into the Management Plan. The Program may submit this report on behalf of the Permittees. The report shall, at a minimum:

   i. Identify the watersheds that are relevant to each Permittee;

   ii. Identify key characteristics related to urban runoff in each watershed and program elements related to such characteristics;

   iii. Provide a priority listing of watersheds to be assessed and a schedule for conducting such assessments, including: 1) investigating beneficial uses and causes of impairment, 2) reviewing, compiling, and disseminating environmental data, and 3) developing and implementing strategies for controlling adverse impacts of land use on beneficial uses;

   iv. Assess each Permittee's implementation of watershed management activities; and,

   v. Outline steps needed for improvement in addressing priorities within each watershed.

b. The Program should also work with Regional Board staff to apply a regulatory strategy that allows the Permittees to find ways to coordinate with other agencies within a specific watershed to protect beneficial uses.

12. Modifications to the Management Plan

It is anticipated that the Management Plan may need to be modified, revised, or amended from time to time to respond to changed conditions and to incorporate more effective approaches to pollutant control. Requests for changes may be initiated by the Executive Officer or by the Permittees. Minor changes may be made with the Executive Officer's approval and will be brought to the Regional Board as information items and the Permittees and interested parties will be notified accordingly. If proposed changes imply a major revision of the Program, the Executive Officer shall bring such changes before the Regional Board as permit amendments and notify the Permittees and interested parties accordingly.

13. Modifications to this Order

This Order may be modified, or alternatively, revoked or reissued, prior to the expiration date as follows:

a. To address significant changed conditions identified in the technical reports required by the Regional Board that were unknown at the time of the issuance of this Order;

b. To incorporate applicable requirements of statewide water quality control plans adopted by the State Board or amendments to the Basin Plan approved by the State Board; or

c. To comply with any applicable requirements, guidelines, or regulations issued or approved under Section 402(p) of the CWA, if the requirement, guideline, or regulation so issued or approved

contains different conditions or additional requirements not provided for in this Order. The Order as modified or reissued under this paragraph shall also contain any other requirements of the CWA then applicable.

14. Each of the Permittees shall comply with all parts of the Standard Provisions contained in Appendix A of this Order.

15. This Order expires on February 19, 2008, five years from the date of adoption of this Order by the Regional Board. The Permittees must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of such date as application for reissuance of waste discharge requirements.

16. Order Nos. 97-030 and 99-049 are hereby rescinded.

I, Loretta K. Barsamian, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on February 19, 2003.

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Loretta K. Barsamian
Executive Officer

APPENDICES: PROVISION C.3 REQUIREMENTS:
Table 1. Summary of Annual and One-Time Reporting Requirements
Table 2. Implementation Schedule
STANDARD PROVISIONS

ATTACHMENT A - Alameda Countywide Clean Water Program Stormwater Quality Management Plan - Title Page and Table of Contents

ATTACHMENT B - Watershed Assessment and Monitoring Strategy for Fiscal Years 2002-2008

ATTACHMENT C - Municipalities and Major Open Creeks and Waterbodies in Alameda County

Table 1: Summary of Annual and One-Time Reporting Requirements

Provision	Information to Report	Date
C.3.b *Project Approval Process*	List of any modifications made to development project approval process	2004 & 2005 Annual Reports
	Modification of project review processes completed	Feb. 15, 2005
C.3.c.iii	Optional: Propose an Alternative Group 2 Project definition	No deadline
C.3.e *O & M*	Details of O&M verification program: organizational structure, evaluation, proposed improvements, list/# of inspections and follow-up	Beginning with 2005 Annual Report
C.3.f *Peak Runoff Limitation*	Submit a detailed workplan and schedule	Feb. 15, 2004
	Submit literature review	Feb. 15, 2004
	Submit draft Hydrograph Modification Management Plan (HMP)	Nov. 15, 2004
	Submit final HMP for Regional Board approval	May 15, 2005
C.3.g *Alternative Compliance*	Name and location of alternative project or exemption; Project type and size; Area or percent impervious surface; Reason for granting the alternative project or exemption; Terms of the alternative project or exemption; The stormwater treatment project or regional project receiving the benefit, and the date of completion of the project.	In each Annual Report; Begin the year an alternative project granted
C.3.h *Alternate Certification*	List the projects certified by someone other than a Discharger employee	In each Annual Report
C.3.j *Site Design Guidance*	Summarize the status of review, revision, and implementation of Site Design Measures Guidance and standards	In each Annual Report
	Submit workplan and schedule for revision of guidance	August 15, 2003
	Submit draft proposal of revised standards and guidance	Nov. 15, 2004
	Summarize how any revisions to site design standards and/or guidance have been incorporated into local approval process	Beginning with 2005 Annual Report
C.3.k *Source Control*	Submit draft conditions of approval document for source control measures	August 15, 2004
	Summarize how any revisions to source control measures guidance document have been implemented	Beginning with 2005 Annual Report
C.3.l *General Plan*	Summarize any revisions to General Plans that direct land-use decisions and require implementation of consistent water quality protection measures for development projects	In Annual Reports
C.3.n *Reporting*	List new development and redevelopment projects by name, type of project (using the categories in Provision C.3.c.), site acreage or square footage, square footage of new impervious surface. Where applicable, report treatment measures and numeric sizing criteria used, O&M responsibility mechanism, site design measures used, and source control measures required	In each Annual Report following implementation

Table 2: Implementation Schedule

Provision	Action	Implementation Date
C.3.b	Modify development project approval process as needed	February 15, 2005
C.3.c *Project Categories*	Require stormwater treatment measures at Group 1 Projects	February 15, 2005
	Require stormwater treatment measures at Group 2 Projects in addition to Group 1 Projects	August 15, 2006
	Optional: Propose an Alternative Group 2 Project definition	No deadline
C.3.e *O & M*	Implement an O&M verification program for Group 1 Projects	July 1, 2004
	Begin reporting on O&M verification program in Annual Report	Annually, beginning with Annual Report to be submitted September 2005
	Vector Control Plan	June 1, 2004
C.3.f *Peak Runoff Limitation*	Submit a detailed workplan and schedule	February 15, 2004
	Submit literature review	February 15, 2004
	Submit draft HMP	November 15, 2004
	Submit final HMP for Regional Board approval	May 15, 2005
	Implement HMP	Following Regional Board approval
C.3.g *Alternative Compliance*	Report on any alternative project or exemption(s) granted by the Discharger in Annual Report, due September of each year	Begin the year an alternative project granted
C.3.j *Site Design*	Submit workplan and schedule for completion of review, revision, and implementation of design standards and guidance	August 15, 2003
	Submit draft proposal of revised standards and guidance	Nov. 15, 2004
	Incorporate revisions into local process and fully implement site design standards and guidance	Nov. 15, 2005
C.3.k *Source Control*	Submit draft conditions of approval document for source control measures	August 15, 2004
	Implement source control measures guidance document	February 15, 2005
C.3.l *General Plans*	Confirm that any water quality and watershed protection principles and policies necessary to implement measures required by Provision C.3. for applicable development projects have been incorporated into General Plan or equivalent plan	By Implementation Date of corresponding action
C.3.m	Revise Environmental Review Processes as needed to evaluate water quality impacts of stormwater runoff from new development and significant redevelopment	May 15, 2004
C.3.n *Reporting*	See Table 1	See Table 1

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

August 1993

STANDARD PROVISIONS AND REPORTING REQUIREMENTS

For

NPDES SURFACE WATER DISCHARGE PERMITS

A. GENERAL PROVISIONS

1. Neither the treatment nor the discharge of pollutants shall create a pollution, contamination, or nuisance as defined by Section 13050 of the California Water Code.

2. All discharges authorized by this Order shall be consistent with the terms and conditions of this Order.

3. Duty to Comply

   a. If a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Clean Water Act, or amendments thereto, for a toxic pollutant which is present in the discharge authorized herein and such standard or prohibition is more stringent than any limitation upon such pollutant in a Board adopted Order, discharger must comply with the new standard or prohibition. The Board will revise or modify the Order in accordance with such toxic effluent standard or prohibition and so notify the discharger.

   b. If more stringent applicable water quality standards are approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the discharger must comply with the new standard. The Board will revise and modify this Order in accordance with such more stringent standards.

   c. The filing of a request by the discharger for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. [40 CFR 122.41(f)]

4. Duty to Mitigate

   The discharger shall take all reasonable steps to minimize or prevent any discharge in violation of this order and permit which has a reasonable likelihood

of adversely affecting public health or the environment, including such accelerated or additional monitoring as requested by the Board or Executive Officer to determine the nature and impact of the violation. [40 CFR 122.41(d)]

5. Pursuant to U.S. Environmental Protection Agency regulations the discharger must notify the Regional Board as soon as it knows or has reason to believe (1) that they have begun or expect to begin, use or manufacture of a pollutant not reported in the permit application, or (2) a discharge of toxic pollutants not limited by this permit has occurred, or will occur, in concentrations that exceed the limits specified in 40 CFR 122.42(a).

6. The discharge of any radiological, chemical, or biological warfare agent waste is prohibited.

7. All facilities used for transport, treatment, or disposal of wastes shall be adequately protected against overflow or washout as the result of a 100-year frequency flood.

8. Collection, treatment, storage and disposal systems shall be operated in a manner that precludes public contact with wastewater, except where excluding the public is inappropriate, warning signs shall be posted.

9. Property Rights

   This Order and Permit does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, nor protect the discharger from liabilities under federal, state or local laws, nor create a vested right for the discharge to continue the waste discharge or guarantee the discharger a capacity right in the receiving water. [40 CFR 122.41(g)]

10. Inspection and Entry

    The Board or its authorized representatives shall be allowed:

    a. Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of the order and permit;

    b. Access to and copy at, reasonable times, any records that must be kept under the conditions of the order and permit;

    c. To inspect at reasonable times any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under the order and permit; and

d. To photograph, sample, and monitor, at reasonable times for the purpose of assuring compliance with the order and permit or as otherwise authorized by the Clean Water Act, any substances or parameters at any locations. [40 CFR 122.41(i)]

11. Permit Actions

This Order and Permit may be modified, revoked and reissued, or terminated in accordance with applicable State and/or Federal regulations. Cause for taking such action includes, but is not limited to any of the following:

a. Violation of any term or condition contained in the Order and Permit;

b. Obtaining the Order and Permit by misrepresentation, or by failure to disclose fully all relevant facts;

c. Endangerment to public health or environment that can only be regulated to acceptable levels by order and permit modification or termination; and

d. Any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

12. Duty to Provide Information

The discharger shall furnish, within a reasonable time, any information the Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit. The discharger shall also furnish to the Board, upon request, copies of records required to be kept by its permit. [40 CFR 122.41(h)]

13. **Bypass** (the intentional diversion of waste streams from any portion of a treatment facility) is prohibited. The Board may take enforcement action against the discharger for plant bypass unless:

a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.);

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment down time. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of

reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

c. The discharger submitted advance notice of the need for a bypass to the Board. If the discharger knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass. The discharger shall submit notice of an unanticipated bypass as required by 40 CFR 122.41(l)(6) (24 hour notice), as required in paragraph E.6.d.

The discharger may allow a bypass to occur that does not cause effluent limitations to be exceeded, but only if it is for essential maintenance to assure efficient operation.

14. Availability

A copy of this permit shall be maintained at the discharge facility and be available at all times to operating personnel.

15. Continuation of Expired Permit

This permit continues in force and effect until a new permit is issued or the Board rescinds the permit. Only those dischargers authorized to discharge under the expiring permit are covered by the continued permit.

B. STANDARD STORM WATER PROVISIONS

These provisions apply to facilities which do not direct all storm water flows to the wastewater treatment plant headworks.

1. The Storm Water Pollution Prevention Plan (SWPP Plan) shall be designed in accordance with good engineering practices and shall address the following objectives:

   a. to identify pollutant sources that may affect the quality of storm water discharges; and
   b. to identify, assign, and implement control measures and management practices to reduce pollutants in storm water discharges.

   The SWPP Plan may be combined with the existing spill prevention plan as required in accordance with Provision E.5. The SWPP Plan shall be retained on-site and made available upon request of a representative of the Board.

2. Source Identification

   The SWPP Plan shall provide a description of potential sources which may be expected to add significant quantities of pollutants to storm water discharges, or

which may result in non-storm water discharges from the facility. The SWPP Plan shall include, at a minimum, the following items:

a. A topographical map (or other acceptable map if a topographical map is unavailable), extending one-quarter mile beyond the property boundaries of the facility, showing: the wastewater treatment facility process areas, surface water bodies (including springs and wells), and the discharge point(s) where the facility's storm water discharges to a municipal storm drain system or other points to waters of the State. The requirements of this paragraph may be included in the site map required under the following paragraph if appropriate.

b. A site map showing:
   i. Storm water conveyance, drainage, and discharge structures;
   ii. An outline of the storm water drainage areas for each storm water discharge point;
   iii. Paved areas and buildings;
   iv. Areas of pollutant contact with storm water or release to storm water, actual or potential, including but not limited to outdoor storage, and process areas, material loading, unloading, and access areas, and waste treatment, storage, and disposal areas;
   v. Location of existing storm water structural control measures (i.e., berms, coverings, etc.);
   vi. Surface water locations, including springs and wetlands;
   vii. Vehicle service areas.

c. A narrative description of the following:
   i. Wastewater treatment process activity areas;
   ii. Materials, equipment, and vehicle management practices employed to minimize contact of significant materials of concern with storm water discharges;
   iii. Material storage, loading, unloading, and access areas;
   iv. Existing structural and non-structural control measures (if any) to reduce pollutants in storm water discharge;
   v. Methods of on-site storage and disposal of significant materials.

d. A list of pollutants that have a reasonable potential to be present in storm water discharge in significant quantities.

3. Storm Water Management Controls

The SWPP Plan shall describe the storm water management controls appropriate for the facility and a time schedule for fully implementing such controls. The appropriateness and priorities of controls in the SWPP Plan shall reflect identified potential sources of pollutants. The description of storm water management controls to be implemented shall include, as appropriate:

a. Storm Water Pollution Prevention Personnel

Identify specific individuals (and job titles) who are responsible for developing, implementing, and reviewing the SWPP Plan.

b. Good Housekeeping

Good housekeeping requires the maintenance of clean, orderly facility areas that discharge storm water. Material handling areas shall be inspected and cleaned to reduce potential for pollutants to enter the storm drain conveyance system.

c. Spill Prevention and Response

Identify areas where significant materials can spill into or otherwise enter the storm water conveyance systems and their accompanying drainage points. Specific material handling procedures, storage requirements, cleanup equipment and procedures should be identified, as appropriate. The necessary equipment to implement a clean up shall be available and personnel trained in proper response, containment and cleanup of spills. Internal reporting procedures for spills of significant materials shall be established.

d. Source Control

Source controls, such as elimination or reduction of the use of toxic pollutants, covering of pollutant source areas, sweeping of paved areas, containment of potential pollutants, labeling all storm drain inlets with "No Dumping" signs, isolation/separation of industrial from non-industrial pollutant sources so that runoff from these areas does not mix, etc.

e. Storm Water Management Practices

Storm water management practices are practices other than those which control the sources of pollutants. They include treatment/conveyance structures such as drop inlets, channels, retention/detention basins, treatment vaults, infiltration galleries, filters, oil/water separators, etc. Based on assessment of the potential of various sources to contribute pollutants to storm water discharges in significant quantities, additional storm water management practices to remove pollutants from storm water discharges shall be implemented and design criteria shall be described.

f. Sediment and Erosion Control

Measures to minimize erosion around the storm water drainage and discharge points such as riprap, revegetation, slope stabilization, etc. shall be described and implemented.

g. Employee Training

Employee training programs shall inform all personnel responsible for implementing the SWPP Plan. Training should address spill response, good housekeeping, and material management practices. New employee and refresher training schedules should be identified.

h. Inspections

All inspections shall be done by trained personnel. Material handling areas shall be inspected for evidence of, or the potential for, pollutants entering storm water discharges. A tracking or follow up procedure shall be used to ensure appropriate response has been taken in response to an inspection. Inspections and maintenance activities shall be documented and recorder. Inspection records shall be retained for five years.

i. Records

A tracking and follow-up procedure shall be described to ensure that adequate response and corrective actions have been taken in response to inspections.

4. An annual facility inspection shall be conducted to verify that all elements of the SWPP Plan are accurate and up to date. This results of this review shall be reported in the annual report to the Board on October 1 of each year.

C. SLUDGE MONITORING AND REPORTING

1. When sewage sludge is either sent to a landfill or applied to land as a soil amendment it should be monitored as follows:

a. Sewage sludge disposal shall be monitored at the following frequency:

Metric tons sludge/365 days	**Frequency**
0-290	Once per year
290-1500	Quarterly
1500-15,000	Six times per year
Over 15,000	Once per month

(Metric tons are on a dry weight basis)

b. Sludge shall be monitored for the following constituents:

Land Application: As, Cd, Cr, Cu, Hg, Mo, Ni, Pb, Se, Zn
Municipal Landfill: Paint filter test (pursuant 40 CFR 258)

Sludge-only Landfill: As, Cd, Ni, (if no liner and leachate system)

2. The sludge must meet the following requirements prior to land application. The discharger must either demonstrate compliance or, if it sends the sludge to another party for further treatment and/or distribution, must give the recipient the information necessary to assure compliance.

   a. Exceptional quality sludge: Sludge that meets the pollutant concentration limits in Table III of 40 CFR Part 503.13, Class A pathogen limits, and one of the vector attraction reduction requirements in 503.33(b)(1)-(b)(8) is exceptional quality sludge and does not have to be tracked further for compliance with general requirements (503.12) and management practices (503.14).

   b. Sludge used for agricultural land, forest, or reclamation shall meet the pollutant limits in Table I (ceiling concentrations) and Table II or Table III (cumulative loadings or pollutant concentration limits) of 503.13. It shall also meet the general requirements (503.12) and management practices (503.14) (if not exceptional quality), Class A or Class B pathogen levels with associated access restrictions (503.32) and one of the 10 vector attraction reduction requirements in 503.33(b)(1)-(b)(10).

   c. Sludge used for lawn or home gardens must meet exceptional quality sludge limits.

   d. Sludge that is sold or given away in a bag or other container shall meet the pollutant limits in either Table III or Table IV (pollutant concentration limits or annual pollutant loading rate limits) of 503.13. If Table IV is used, a label or information sheet must be attached that explains Table IV (see 503.14). The sludge must also meet the Class A pathogen limits and one of the vector attraction reduction requirements in 503.33(b)(1)-(b)(8).

D. TREATMENT RELIABILITY

1. The discharger shall, at all times, properly operate and maintain all facilities and systems of treatment disposal and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with this order and permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. All of these procedures shall be described in an Operation and Maintenance Manual. The discharger shall keep in a state of readiness all systems necessary to achieve compliance with the conditions of this order and permit. All systems, both those in service and reserve, shall be inspected and maintained on a regular basis. Records shall be kept of the tests and made available to the Board. [40 CFR 122.41(e)]

2. Safeguard to electric power failure:

a. The discharger shall, within ninety (90) days of the effective date of this permit, submit to the Board for approval a description of the existing safeguards provided to assure that, should there be reduction, loss, or failure of electric power, the discharger shall comply with the terms and conditions of its Order. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures or other means. A description of the safeguards provided shall include an analysis of the frequency, duration, and impact of power failures experienced over the past five years on effluent quality and on the capability of the discharger to comply with the terms and conditions of the Order. The adequacy of the safeguards is subject to the approval of the Regional Board.

b. Should the Board not approve the existing safeguards, the discharger shall, within ninety (90) days of having been advised by the Board that the existing safeguards are inadequate, provide to the Board and the U.S. Environmental Protection Agency a schedule of compliance for providing safeguards such that in the event of reduction, loss, or failure of electric power, the permittee shall comply with the terms and conditions of this permit. The schedule of compliance shall, upon approval of the Board Executive Officer, become a condition of the Order.

c. If the discharger already has approved plan(s), the plan shall be revised and updated as specified in the plan or whenever there has been a material change in design or operation. A revised plan shall be submitted to the Board within ninety (90) days of the material change.

3. POTW facilities subject to this order and permit shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to Division 4, Chapter 14, Title 23 of the California Code of Regulations.

E. GENERAL REPORTING REQUIREMENTS

1. Signatory Requirements

a. All reports required by the order and permit and other information requested by the Board or USEPA Region 9 shall be signed by a principal executive officer or ranking elected official of the discharger, or by a duly authorized representative of that person. [40 CFR 122.22(b)]

b. Certification

All reports signed by a duly authorized representative under Provision E.1.a. shall contain the following certification:

"I certify under penalty of law that this document and all attachments are prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. [40 CFR 122.22(d)]

2. Should the discharger discover that it failed to submit any relevant facts or that it submitted incorrect information in any report, it shall promptly submit the missing or correct information. [40 CFR 122.41(l)(8)]

3. False Reporting

   Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall be subject to enforcement procedures as identified in Section F of these Provisions.

4. Transfers

   a. This permit is not transferable to any person except after notice to the Board. The Board may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Clean Water Act.

   b. Transfer of control or ownership of a waste discharge facility under an National Pollutant Discharge Elimination System permit must be preceded by a notice to the Board at least 30 days in advance of the proposed transfer date. The notice must include a written agreement between the existing discharger and proposed discharger containing specific dates for transfer of responsibility, coverage, and liability between them. Whether an order and permit may be transferred without modification or revocation and reissuance is at the discretion of the Board. If order and permit modification or revocation and reissuance is necessary, transfer may be delayed 180 days after the Board's receipt of a complete application for waste discharge requirements and an NPDES permit.

5. Spill Prevention and Contingency Plans

   The discharger shall file with the Board, for Executive Officer review and approval within ninety (90) days after the effective date of this Order, a technical report or a statement that the existing plan(s) was reviewed and updated, as

appropriate, on preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. The technical report or updated revisions should:

a. Identify the possible sources of accidental loss, untreated or partially treated waste bypass, and polluted drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.

b. Evaluate the effectiveness of present facilities and procedures and state when they became operational.

c. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule containing interim and final dates when they will be constructed, implemented, or operational.

This Board, after review of the technical report or updated revisions, may establish conditions which it deems necessary to control accidental discharges and to minimize the effects of such events. Such conditions may be incorporated as part of this Order, upon notice to the discharger. If the discharger already has an approved plan(s) he shall update them as specified in the plan(s).

6. Compliance Reporting

a. Planned Changes

The discharger shall file with the Board a report of waste discharge at least 120 days before making any material change or proposed change in the character, location or volume of the discharge.

b. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final compliance dates contained in any compliance schedule shall be submitted within 10 working days following each scheduled date unless otherwise specified within this order and permit. If reporting noncompliance, the report shall include a description of the reason for failure to comply, a description and schedule of tasks necessary to achieve compliance and an estimated date for achieving full compliance. A final report shall be submitted within 10 working days of achieving full compliance, documenting full compliance

c. Anticipated Non-compliance

All POTWs must provide adequate notice to the Board of:

i. Any introduction of new pollutants into the POTW from an indirect discharger that would be subject to Sections 301 or 306 of the Clean Water Act if it were directly discharging those pollutants.

ii. Any substantial or material change in the volume or character of pollutants being introduced into that POTW by an input source at the time of issuance of the permit.

Adequate notice shall include information on the quality and quantity of influent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

d. Non-compliance Reporting (Twenty-four hour reporting:)

i. The discharger shall report any noncompliance that may endanger health or the environment. All pertinent information shall be provided orally within 24 hours from the time the discharger becomes aware of the circumstances. A written submission shall also be provided within five working days of the time the discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

ii. The following shall be included as information that must be reported within 24 hours under this paragraph:

(1) Any unanticipated bypass that exceeds any effluent limitation in the permit.

(2) Any upset that exceeds any effluent limitation in the permit.

(3) Violation of a maximum daily discharge limitation for any of the pollutants listed in this permit to be reported within 24 hours.

(4) The Board may waive the above-required written report on a case-by-case basis.

F. ENFORCEMENT

1. The provision contained in this enforcement section shall not act as a limitation on the statutory or regulatory authority of the Board.

2. Any violation of the permit constitutes violation of the California Water Code and regulations adopted hereunder and the provisions of the Clean Water Act, and is the basis for enforcement action, permit termination, permit revocation and reissuance, denial of an application for permit reissuance; or a combination thereof.

3. The Board may impose administrative civil liability, may refer a discharger to the State Attorney General to seek civil monetary penalties, may seek injunctive relief or take other appropriate enforcement action as provided in the California Water Code or federal law for violation of Board orders.

4. It shall not be a defense for a discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this order and permit.

5. A discharger seeking to establish the occurrence of any upset (See Definitions, G. 24) has the burden of proof. A discharger who wishes to establish the affirmative defense of any upset in an action brought for noncompliance shall demonstrate, through properly signed contemporaneous operating logs, or other relevant evidence that:

   a. an upset occurred and that the permittee can identify the cause(s) or the upset;

   b. the permitted facility was being properly operated at the time of the upset;

   c. the discharger submitted notice of the upset as required in paragraph E.6.d.; and

   d. the discharger complied with any remedial measures required under A.4.

   No determination made before an action for noncompliance, such as during administrative review of claims that noncompliance was caused by an upset, is final administrative action subject to judicial review.

   In any enforcement proceeding, the discharger seeking to establish the occurrence of any upset has the burden of proof. [40 CFR 122.41(n)]

G. DEFINITIONS

1. Bypass means the intentional diversion of waste streams from any portion of treatment facility.

2. Daily discharge means:

a. For flow rate measurements, the average flow rate measured during a calendar day or during any 24-hour period reasonably representative of the calendar day for purposes of sampling.

b. For pollutant measurements, the concentration or mass emission rate measured during a calendar day or during any 24-hour period reasonably representative of the calendar day for purposes of sampling.

3. Daily Maximum Limit means the maximum acceptable daily discharge. For pollutant measurements, unless otherwise specified, the results to be compared to the daily maximum limit are based on composite samples.

4. DDT and Derivatives shall mean the sum of the p,p' and o,p' isomers of DDT, DDD (TDE), and DDE.

5. Duly authorized representative is one whose:

a. Authorization is made in writing by a principal executive officer or ranking elected official;

b. Authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as general manager in a partnership, manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and

c. Written authorization is submitted to the USEPA Region 9. If an authorization becomes no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements above must be submitted to the Board and USEPA Region 9 prior to or together with any reports, information, or applications to be signed by an authorized representative.

6. Hazardous substance means any substance designated under 40 CFR 116 pursuant to Section 311 of the Clean Water Act.

7. HCH shall mean the sum of the alpha, beta, gama (Lindane), and delta isomers of hexachlorocyclohexane.

8. Inadequately Treated Waste is wastewater receiving partial treatment but failing to meet discharge requirements.

9. Incompatible pollutants are:

a. Pollutants which create a fire or explosion hazard in the POTW;

b. Pollutants which will cause corrosive structural damage to the POTW, or wastewaters with pH lower than 5.0 pH units, unless the facilities are specifically designed to accommodate such wastewater;

c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in interference;

d. Any pollutant, including oxygen-demanding pollutants (e.g., BOD) released into the wastewater system at a flow rate and/or pollutant concentration which will cause interference with the POTW.

e. Heat in amounts which will inhibit biological activity in the POTW and result in interference, or heat in such quantities that the temperature at the POTW treatment plant exceeds 40^{o}C (104^{o}F) unless the works is designed to accommodate such heat or the Board approves alternate temperature limits.

10. Indirect discharger means a non-domestic discharger introducing pollutants into a publicly owned treatment and disposal system.

11. Initial dilution is the process which results in the rapid and irreversible turbulent mixing of wastewater with receiving water around the point of discharge.

12. Mass emission rate is obtained from the following calculation for any calendar day:

$$\text{Mass emission rate (lb/day)} = \frac{8.345}{N} \left(\sum_{i=1}^{N} Q_i C_i \right)$$

$$\text{Mass emission rate (kg/day)} = \frac{3.785}{N} \left(\sum_{i=1}^{N} Q_i C_i \right)$$

In which 'N' is the number of samples analyzed in any calendar day. 'Q_i' and 'C_i' are the flow rate (MGD) and the constituent concentration (mg/L), respectively, which are associated with each of the 'N' grab samples which may be taken in any calendar day. If a composite sample is taken, 'C_i' is the concentration measured in the composite sample and 'Q_i' is the average flow rate occurring during the period over which samples are composited. The daily concentration measured over any calendar day of all constituents shall be determined from the flow- weighted average of the same constituents in the combined waste streams as follows:

$$N$$

C_d = Average daily concentration = $\frac{1}{Q_t}(\sum_{i=1} Q_i C_i)$

In which 'N' is the number of component waste streams. 'Q' and 'C' are the flow rate (MGD) and the constituent concentration (mg/L), respectively, which are associated with each of the 'N' waste streams. 'Q_t' is the total flow rate of the combined waste streams.

13. Maximum allowable mass emission rate, whether for a 24-hour, weekly 7-day, monthly 30-day, or 6-month period, is a limitation expressed as a daily rate determined with the formulas in paragraph above, using the effluent concentration limit specified in the order and permit for the period and the specified allowable flow. (Refer to Section C of Part A of Self- Monitoring Program for definitions of limitation period)

14. Overflow is defined as the intentional or unintentional spilling or forcing out of untreated or partially treated wastes from a transport system (e.g. through manholes, at pump stations, and at collection points) upstream from the plant headworks or from any treatment plant facilities.

15. POTW means Publicly Owned Treatment Works.

16. POTW Removal efficiency is expressed as the percentage of the ratio of pollutants removed by the treatment facilities to pollutants entering the treatment facilities. Removal efficiencies of a treatment plant shall be determined using monthly averages of pollutant concentration of influent and effluent samples collected at about the same time and using the following equation (or its equivalent):

    Removal Efficiency (%) = 100 X [1-(**Effluent Conc.**/**Influent Conc.**)]

    When preferred, the discharger may substitute mass loadings and mass emissions for the concentrations.

17. Priority pollutants are those constituents referred to in 40 CFR S122, Appendix D and listed in the USEPA NPDES Application Form 2C, (dated 6/80) Items V-3 through V-9.

18. Sludge means the solids, semi-liquid suspensions of solids, residues, screenings, grit, scum, and precipitates separated from, or created in wastewater by the unit processes of a treatment system. It also includes but is not limited to, all supernatant, filtrate, centrate, decantate, and thickener overflow/underflow in the solids handling parts of the wastewater treatment system.

19. Storm Water means storm water runoff, snow melt runoff, and surface runoff and drainage. It excludes infiltration and runoff from agricultural land.

20. Toxic pollutant means any pollutant listed as toxic under Section 307(a)(1) of the Clean Water Act or under 40 CFR S401.15.

21. Total Identifiable Chlorinated hydrocarbons (TICH) shall be measured by summing the individual concentrations of DDT, DDD, DDE, aldrin, BHC, chlordane, endrin, heptachlor, lindane, dieldrin, PCBs and other identifiable chlorinated hydrocarbons.

22. Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass or overflow. It does not mean economic loss caused by delays in production.

23. Untreated waste is defined as raw wastewater.

24. Upset means an exceptional incident in which there is unintentional temporary noncompliance with effluent technology based permit limitations in the order and permit because of factors beyond the reasonable control of the discharger. It does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

25. Waste, waste discharge, discharge of waste, and discharge are used interchangeably in this order and permit. The requirements of this order and permit are applicable to the entire volume of water, and the material therein, which is disposed of to surface and ground waters of the State of California.

MEMBER AGENCIES:

Alameda

Alameda County

Alameda County Flood Control and Water Conservation District

Albany

Berkeley

Dublin

Emeryville

Fremont

Hayward

Livermore

Newark

Oakland

Piedmont

Pleasanton

San Leandro

Union City

Zone 7 of the Alameda County Flood Control District

STORMWATER QUALITY MANAGEMENT PLAN

July 2001 – June 2008

Alameda Countywide Clean Water Program

A Consortium of Local Agencies

TABLE OF CONTENTS

ACRONYMS

ACCWP	Alameda Countywide Clean Water Program
BASMAA	Bay Area Stormwater Management Agencies Association
BMPs	Best Management Practices
CDPR	California Department of Pesticide Regulation
CWA	Clean Water Act
DTSC	Department of Toxic Substances Control
FIFRA	Federal Insecticide, Fungicide and Rodenticide Act
FY	Fiscal Year
GBP	Green Business Program
GIS	Geographic Information Systems
HHW	Household Hazardous Waste
I&IDC	Industrial and Illicit Discharge Control
II&ID	Illicit Discharge Controls and Industrial/Commercial Discharge Controls
IPM	Integrated Pest Management
MOA	Memorandum of Understanding
NAS	National Academy of Sciences
NPDES	National Pollutant Discharge Elimination System
P^2	Pollution Prevention
PCBs	Polychlorinated biphenyls
PCOs	Pest Control Operators
PI/P	Public Information and Participation
PRPs	Pollutant Reduction Plans
RMAS	Regional Monitoring and Assessment Strategy
RMP	Regional Monitoring Program for Trace Substances
SUSMPs	Standard Urban Stormwater Mitigation Plans
SWMM	Storm Water Management Model
TIEs	Toxicity Identification Evaluations
TMDL	Total Maximum Daily Load
U.S. EPA	United States Environmental Protection Agency
WAMS	Watershed Assessment and Monitoring Subcommittee

DEFINITIONS

Act	Porter-Cologne Water Quality Control Act
BMPs	Best Management Practices – Practices Implemented by private industry and public agencies which prevent or reduce water pollution.
District	Alameda County Flood Control and Water Conservation District
Plan	Stormwater Quality Management Plan
Program	Alameda County Clean Water Program
Regional Board	California Regional Water Quality Control Board, San Francisco Bay Region
Stakeholders	People that live and work in a watershed
State Board	State Water Resources Control Board

SECTION 1 INTRODUCTION AND BACKGROUND

INTRODUCTION

The Alameda Countywide Clean Water Program (Program) is a consortium of agencies within Alameda County that discharge stormwater to the San Francisco Bay. This Stormwater Quality Management Plan (Plan) describes the Program's approach to reducing stormwater pollution.

There are five major sections to the Plan. The Background provides a brief history of water quality regulations. The Program Description describes the structure, accomplishments, and recent developments of the Program. The Component Work Plans describe the objectives and tasks of each Program component. The Pollution Reduction Plans describe the actions the Program and the member agencies will take to address specific pollutants that are impairing water quality. Lastly, the Performance Standards list specific tasks that the member agencies are required to perform.

The Plan for FY 2001/02 through 2007/08 is the Program's third stormwater quality management plan and will serve as the basis of the Program's third stormwater discharge permit from the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Board). The Plan was submitted to the Regional Board 180 days prior to the expiration of the Program's second permit on February 19, 2002. The federal Clean Water Act (1972) requires stormwater dischargers to reduce pollutants to the maximum extent practicable. The Plan, in conjunction with the permit adopted by the Regional Board, is designed to enable the consortium to meet that requirement.

BACKGROUND

HISTORY OF THE CLEAN WATER ACT

By the late 1960s, urbanization and industrialization had taken a toll on the nation's waters: many rivers and bays were visibly polluted. In response to growing public concern over water pollution, Congress passed the Clean Water Act (1972). The goals of the Clean Water Act are to restore the biological, physical, and chemical integrity of our nation's waters and to make all of our waters fishable and swimable.

Section 402 of the Clean Water Act (CWA) established the National Pollutant Discharge Elimination System (NPDES) permit program. The NPDES permit program set nationwide permitting requirements for discharging pollutants into waterways. The limits varied by category of industry and were based on a level of treatment that was achievable using the best available technology. The 1987 amendments to the CWA required that municipal stormwater discharges obtain NPDES permit coverage. These amendments required municipalities to effectively prohibit non-stormwater discharges to their storm drain systems and to implement controls to reduce pollutants in stormwater to the maximum extent practicable.

PORTER-COLOGNE WATER QUALITY CONTROL ACT

In California, the State Water Resources Control Board (State Board) along with the nine Regional Boards has primary responsibility for regulating water quality. The State Board has overall responsibility for water quality regulation under division 7 of the Porter-Cologne Water Quality Control Act (Act). This Act also divides the state into nine hydrological basins, for local administration of the Act by the semiautonomous Regional Boards with coordination and oversight from the State Board. The Regional Boards have authority to regulate point source discharges, such as municipal stormwater discharges, through the adoption of waste discharge requirements under chapter 5.5 of the Act. In addition, the responsibility for implementing the NPDES permit program has been delegated to the State Board and its local Region Boards.

RECENT DEVELOPMENTS

The implementation of the CWA has been very effective in cleaning up our nation's waters. The reduction of pollution has been particularly dramatic for industrial and sanitary treatment plant discharges. For example, the amount of metals being discharged from these sources decreased by about 60 percent between 1986 and 1999 (T. Wu, personal communication, February 2001). However, many of our nation's waters still do not meet the goals set forth in the CWA. Two approaches to address this problem are being implemented, namely, the total maximum daily load (TMDL) program, and the watershed management approach.

TMDL Program

A TMDL is an estimate of the maximum quantity of a pollutant that could be discharged to a body of water while still ensuring the attainment of water quality standards. The TMDL program was established by Section 303 of the CWA. Congress correctly presumed that even after the implementation of technology based controls, some water bodies would not meet water quality standards. For each water body that does not meet applicable standards (referred to as "impaired"), a TMDL must be established. After the TMDL is established, additional requirements are placed on sources of the pollutant so that the total quantity of the pollutant discharged to the water body from all sources is no greater than the established TMDL.

In response to lawsuits, the U.S. Environmental Protection Agency (U. S. EPA) has recently initiated an intensive effort to develop TMDLs for all impaired waters. In the San Francisco Bay region, TMDLs are scheduled to be developed for mercury, PCBs, chlorinated pesticides, diazinon, sediment, and several other pollutants.

Watershed Management Approach

A watershed is the area of land that drains to a specific body of water. USEPA defines the watershed management approach as having the following components: problem identification, stakeholder involvement, and integrated actions. The watershed management approach is similar to the TMDL approach in that both address

water quality problems in a comprehensive manner. The difference between the two is that the TMDL approach is primarily a command and control approach, whereas the watershed management approach focuses on developing cooperative solutions. Under the watershed management approach, people that live and work in a watershed (stakeholders) develop a consensus regarding the best solutions to watershed problems. The watershed management approach can also encompass issues such as flood control, habitat restoration, and water supply, which are not specifically regulated by the CWA. This Plan describes the Program's involvement in both the TMDL program and the watershed management approach.

SUSMPs

SUSMPs (Standard Urban Stormwater Mitigation Plans) represent a new initiative by the State Board and Regional Boards to control the detrimental effects on water quality caused by new development and redevelopment. The Los Angeles Regional Water Quality Control Board initiated the use of SUSMPs, and under appeal to the State Board, its use was upheld in October 2000 as the statewide standard for what constitutes maximum extent practicable stormwater controls. In the Bay area SUSMPs will need to be tailored to fit local hydrologic and development conditions.

The Alameda Countywide Clean Water Program has long implemented the portion of the SUSMPs requiring the use of BMPs. One of the new parts is the requirement specifying that about 85 percent of the volume of runoff typical of an average wet season must be treated. Another new part will be the requirement to minimize the rate of runoff that flows from a project site in order to prevent increased erosion of creek channels.

It is expected that SUSMPs will be increasingly used to impose requirements on new development and redevelopment that will be more specific and numeric.

SECTION 2 PROGRAM DESCRIPTION

MISSION, VISION, AND STRATEGIC OBJECTIVES

Mission

The mission of the Alameda Countywide Clean Water Program is to help local residents, businesses and municipalities meet the stormwater quality goals of the Clean Water Act.

Vision

We, the member agencies, see the Alameda Countywide Clean Water Program as an innovative, nationally recognized leader in efficient and effective stormwater management, protecting and preserving our natural water resources and the San Francisco Bay.

Strategic Objectives: To accomplish its mission and vision, the Program has developed the following strategic objectives:

- Continue our self-directed, proactive approach fostering trust and respect from regulators and business and environmental groups;
- Produce tangible water quality improvements through expanded collaborations with other organizations;
- Communicate a clear vision of the Program's goals and objectives to the public, and to member agencies' staff, management, and elected officials; and,
- Improve communication links and working relationships among departments within member agencies and between the Program and Regional Board staff.

PROGRAM STRUCTURE

The following agencies are members of the Program: the cities of Alameda, Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Newark, Oakland, Piedmont, Pleasanton, San Leandro, and Union City; the County of Alameda; the Alameda County Flood Control and Water Conservation District (District); and Zone 7 of the District. The Program was established in 1991 through a Memorandum of Agreement (MOA). The MOA established a General Program and individual programs. The General Program carries out activities in common on behalf of the member agencies. The individual programs are implemented by each member agency. A copy of the MOA is included in Appendix A.

As part of its individual program, each of the member agencies is responsible for complying with the NPDES permit requirements for discharges from its municipally owned storm drain system. The NPDES permit finds that enforcement actions will, wherever possible, be pursued only against the individual agency responsible for the violation. As an area wide activity, the General Program will inform any of the member agencies about potential significant permit compliance problems that it becomes aware of and will offer suggested solutions.

There are eight components to the Program: Planning and Regulatory

Compliance, Watershed Assessment, Monitoring and Special Studies, Public Information and Participation, Municipal Maintenance Activities, New Development and Construction Controls, Illicit Discharge Controls, and Industrial/Commercial Discharge Controls. Component objectives and tasks are described in Section 4. Individual Program activities are described in the Performance Standards (Section 5). Each component is coordinated through a subcommittee that is composed of representatives of the member agencies. All subcommittees report to the Management Committee which is the official decision making body for the Program.

General Program activities are funded by the member agencies through contributions proportional to their area and population. The General Program budget for fiscal year 2001-2002 is $2.1 million. A copy of the General Program component tasks and budgets for fiscal year 2001-2002 is included in Appendix B.

PROGRAM ACHIEVEMENTS

The Program has enjoyed significant achievements, such as, increasing public awareness, developing a model inspection program, initiating a watershed approach, and identifying diazinon as a significant stormwater toxicant. A few of the Program's achievements are described below; other achievements are described in the component work plans.

Public Awareness

A major focus of the Program's effort has been to raise the public's awareness of stormwater pollution and the public's role in preventing it. To accomplish that goal the Program initiated numerous activities; including, (1) participated in the Bay Area Stormwater Management Agencies Association's regional television advertising campaign "When Ants Invade," which promoted the use of less toxic pest control practices and won a national advertising industry award; (2) sponsored the development of innovative outreach programs such as *Bay Savers* and *Kids in Creeks*, which encourage watershed awareness and pollution prevention among elementary school students; (3) distributed over 100,000 educational brochures, fact sheets and promotional items; (4) stenciled over 10,000 drop inlets with the "No Dumping Drains to Bay" message; (5) provided over fifty community stewardship grants to local teachers and student groups, environmental groups, service clubs, homeowner associations, and other clean water partners; and (6) implemented two major point of purchase campaigns to educate consumers about less toxic alternatives to pesticides. These efforts have been very successful: in a recent survey of Alameda County residents, 45% of respondents mentioned stormwater runoff as a major cause of water pollution and 74%, believed that their behavior could affect water quality.[1]

Model Industrial/Commercial Stormwater Inspection Program

In 1993 the Program's municipalities started to conduct stormwater inspections combined with educational outreach to businesses. Since then, more than 10,000 inspections have been

conducted. Based on an evaluation of approximately 1,200 businesses inspected two or more times, the accomplishments of this inspection and educational effort include the following: 1) The number of non-stormwater discharges decreased by about one-fourth; 2) a decline of almost one-half occurred in the number of businesses judged to have a high potential to discharge pollutants to stormwater; and 3) an increase was observed in the use of Best Management Practices. In some ways the program has served as a model as judged by the use of Program's municipal inspection staff in 2000 to help train staff from the Regional Boards; the Program's receipt of a state grant in 1996 to develop a statewide inspection handbook; and the use of several of the inspection program's ideas by other municipal stormwater programs in the Bay area.

Watershed Approach

During the past five years the Program has worked closely with its member agencies and local organizations to begin building successful collaborations in local watersheds. The Program has funded the development of watershed maps, which have been very useful to community groups, and has developed a countywide geographic information system (GIS) that includes data on topography, soil type, impervious surfaces, creeks, storm drains, sanitary sewer lines, water quality, fisheries, and habitat quality. In addition, the Program's member agencies have provided funding to support the development of creek groups and have been participating in numerous ongoing watershed efforts, including, Sausal Creek, Alameda Creek, Laguna Creek, San Leandro Creek, San Lorenzo Creek, and Lake Merritt. This has resulted in improved stewardship for these creeks and thousands of volunteer hours dedicated to advocacy, clean up, educational outreach, restoration and other improvements to water quality.

Diazinon

When the Program conducted its stormwater pollutant characterization effort (1990 through 1992), it was not anticipated that current generation pesticides would cause impairment of local creeks. However, through the use of toxicity tests and toxicity identification evaluations, the Program found that diazinon, a widely used insecticide, was a significant cause of stormwater toxicity.[2] That finding led to the eventual listing of local creeks as being impaired due to diazinon. After determining that diazinon was a prevalent toxicant, the Program conducted several studies to determine the sources of diazinon in stormwater. One of these studies found that the application of diazinon in accordance with label directions may be responsible for much of the diazinon found in stormwater.[3] The results of that study were cited in U. S. EPA's recent assessment of diazinon that resulted in a national ban on the sale of diazinon for urban use after 2004.[4]

EVOLUTION OF THE PROGRAM

A great deal has been accomplished over the past ten years. However, as the Program moves into its third permit, it faces significant challenges. In particular, the listings of the bay and creeks as impaired by specific pollutants will require increased efforts to reduce the discharges of these pollutants in

stormwater prior to and as part of TMDLs. The increased focus on other stormwater impacts to local creeks will also require additional effort.

Response to Impairment

The Regional Board conducts periodic reviews of data on water bodies in the region to determine if any pollutant is causing an impairment. As a result of the Regional Board's 1998 review of existing data, the State Board and U. S. EPA listed San Francisco Bay as impaired due to several pollutants, including, mercury, polychlorinated biphenyls (PCBs), diazinon, chlorinated insecticides, and copper. Several creeks in Alameda County are also listed as impaired due to diazinon.

There are often multiple sources of these pollutants, for example, sources may include industrial and sanitary discharges, air emissions and deposition, historic deposits, or stormwater discharges. To address the contribution of these pollutants coming from Alameda County's stormwater discharge, the Program has developed Pollutant Reduction Plans (see Section 4). These Pollutant Reduction Plans provide a description of the problem the pollutants are causing, the known or suspected sources of the pollutant, and the Program's approach to minimizing its discharge of the pollutant. Also included is a list of tasks the Program will complete during the next two years (i.e., FY 2001/02 and 2002/03). These work plans are based on our current understanding of the sources and the appropriate next steps. Beginning in 2002, proposed tasks for future years will be submitted to the Board along with the Program's Annual Report.

Local Watershed Efforts

The previous stormwater management plan recognized that the Program should investigate the watershed management approach as an alternative method for solving local environmental problems. In contrast to the traditional command and control regulatory approach, the watershed approach is characterized by collaborative planning among the various stakeholders in a watershed. The solutions derived from this approach typically take longer to develop, but are more tailored to the unique problems and characteristics of individual watersheds. During the past five years the Program has worked closely with its member agencies and other local organizations to begin building successful collaborations in local watersheds. As expected, each watershed has a unique combination of environmental problems, existing organizations, and restoration opportunities, requiring a patient and flexible approach to developing solutions.

This Plan commits the Program to continuing and expanding the use of the watershed management approach. In addition to the extensive effort that will be conducted under the Watershed Assessment component, the Program will conduct the following activities: (1) provide support to watershed stewardship efforts (Public Information and Participation: Task 3); (2) incorporate results of watershed resource inventories into General Plan amendments (New Development: Performance Standard VII); and, (3) provide Program-wide coordination of watershed activities (Planning and Regulatory Compliance: Task 4). The Program and its member agencies will

also continue to work with key stakeholders in local watersheds to determine how the management of stormwater quality can contribute to local creek protection and improvement efforts. To guide the implementation of the watershed approach, the Program will develop a watershed framework The framework will lay out specific goals and a process for the Program's and its member agencies' participation in watershed management efforts.

Increased Planning and Evaluation

Work plans and performance standards are divided into components. As in the past, the implementation of each component will be guided by a subcommittee. This structure has been very effective at allowing the Program to focus on specific areas of activity. However, there remains a need for greater planning and coordination across components. The Program has taken a number of steps to address this need. First, to provide a Program-wide focus to our efforts, the Program has developed mission and vision statements as well as strategic objectives. Second, the Plan includes a task to establish and maintain a work group to provide Program-wide planning and coordination (Planning and Regulatory Compliance: Task 6). The work group will meet on a regular basis and be attended by representatives of the various subcommittees. The development and implementation of Pollutant Reduction Plans will also promote coordination across components.

Another ongoing challenge for the Program, as well as for other stormwater management programs, is evaluating the effectiveness of its stormwater management practices. Due to the tremendous variability in stormwater flow and the ubiquitous nature of stormwater pollutants, it is extremely difficult to detect reductions in pollutant concentrations. Therefore, alternative evaluation methods need to be developed and employed. To address this, the Program has begun to develop methods of assessment for each major task in the component work plans. The Program will continue to develop and implement these methods of assessment over the course of the permit. The Program will also conduct periodic Program-wide evaluations of effectiveness (Planning and Regulatory Compliance: Task 6).

Notes

[1] *Results of the 1999 Public Attitude and Awareness Survey Regarding Storm Water Pollution. 1999, Jenkinson Associates: Sacramento, CA.*

[2] Hansen, S.R., *Identity and Control of Toxicity in Storm Water Discharges to Urban Creeks*. 1995, S.R. Hansen and Associates: Concord, CA.

[3] Scanlin, J. and Feng, A, *Characterization of the Presence and Sources of Diazinon in the Castro Valley Creek Watershed*. 1997, Alameda Countywide Clean Water Program: Hayward, CA.

[4] USEPA Memorandum, *Water Resources Assessment for Diazinon.* May 10, 1999, Office of Prevention, Pesticides and Toxic Substances, U.S. Environmental Protection Agency: Washington, D.C.

SECTION 3 COMPONENT OBJECTIVE AND TASKS

PLANNING AND REGULATORY COMPLIANCE

Introduction

This component encompasses the major planning, regulatory compliance, watershed management, and administrative activities of the Program. The Policy Level Subcommittee oversees this component's activities.

Component Objectives

1. Promote the implementation of effective and reasonable stormwater regulations by participating in regulatory processes. This may include advocating legislation that benefits member agencies.
2. Promote permit compliance by assisting member agencies with reporting and related activities.
3. Improve Program effectiveness by partnering with outside organizations.
4. Protect and improve the physical, chemical and biological integrity of waters in Alameda County through the development of watershed partnerships and the coordination of watershed management efforts.
5. Develop and implement measures to effectively reduce pollutants causing or threatening to cause impairment.
6. Promote Program coordination through Program-wide planning and evaluation.
7. Provide essential management and legal services.

Major Tasks

1. **Participate in the Regulatory Process:**

   - Review and comment on draft legislation and proposed regulations affecting stormwater
   - Confer with the Regional Board and other stakeholders during reissuance or amendment of permit
   - Participate in TMDL development and implementation process
   - Coordinate with other storm water programs through the Bay Area Stormwater Management Agencies Association and the California Stormwater Quality Task Force

   Task Evaluation: The evaluation of this task may include: 1) a review of the Program's participation in the regulatory process; and 2) an evaluation of the effectiveness of that participation.

2. **Assist Members with Permit Compliance:** A fundamental objective of the Program is to ensure that the member agencies comply with the requirements of their permit. The objective of this task is to assist member agencies with the reporting requirements and ensure that reports are submitted on schedule.

- Develop deliverable report forms
- Compile and submit completed deliverable reports to the Regional Board by required dates
- Review member agencies' performance
- Provide additional assistance with permit compliance as requested by member agencies, such as by providing orientation to new staff

Task Evaluation: The evaluation of this task may include: 1) a review of the completeness, and timeliness of report submittals; 2) a review of what the Regional Board staff needs included in the reporting; and 3) an assessment of any impediments to reporting as part reviewing the effectiveness of reporting formats and processes.

3. **Develop Partnerships:** Many public and private organizations have objectives that overlap with the Program's objectives, examples include, Alameda County Household Hazardous Waste Program, Green Business Program, and the Alameda County Waste Management Authority. By working together with these groups and others, the Program will be able to improve its cost-effectiveness. The Program has already begun to build working relationships with these groups and others. The purpose of this task is to expand upon those partnerships and to pursue opportunities to create additional partnerships.

    - Identify and prioritize issues where partnerships could significantly improve effectiveness
    - Seek to develop or enhance partnerships with public and private organizations that have similar interests

    Task Evaluation: The evaluation of this task may include: 1) enumeration of new or expanded partnerships, or 2) assessment of the benefits of those partnerships.

4. **Facilitate Watershed Approach:** The Program is engaged in promoting a watershed approach through activities within several components: the Watershed Assessment component provides technical assistance such as habitat assessments and watershed mapping; the Public Information and Participation component sponsors projects that increase watershed awareness; and, the New Development and Construction Site Controls component's performance standards incorporate results of watershed resource inventories into General Plan amendments. In addition, throughout the county member agencies are participating in numerous watershed efforts. The purpose of this task is to coordinate and assist with these activities.

    - Assess roles for and develop relationships with potential watershed partners: Regional organization such as the East Bay Municipal Utility District, Alameda County Water District, East Bay Regional Park District, and the Urban Creeks Council are potential partners in several county watersheds.
    - Establish a work group to promote information exchange

and coordination among watershed efforts
- Update Watershed Framework Document and implement as appropriate

Task Evaluation: The evaluation of this task may include: 1) the number of new or expanded partnerships, and 2) a survey of agency staff regarding the usefulness of the coordination effort.

5. **Support Pollutant Reduction Plans:** The Program has developed measures to address specific pollutants that are believed to be causing impairment to local water bodies. Planning activities related to the implementation and evaluation of those Plans will be conducted under this task.

   - Implement aspects of the Pollutant Reduction Plans that fall within this component
   - Coordinate implementing and updating the Pollutant Reduction Plans

   Task Evaluation: Evaluation may include: 1) assessment of the level of implementation; and 2) qualitative assessment of effectiveness.

6. **Plan and Evaluate:** Planning and evaluation are essential if the Program is to be effective. This task provides for establishing a work group to coordinate planning and evaluation across all components.

   - Evaluate Program performance and coordinate development of Program-wide annual work plans
   - Develop and maintain newsletter and website

   Task Evaluation: The evaluation for this task may include an assessment of the Program's planning and evaluation process.

7. **Provide Management Services:** The objective of this task is to provide essential administrative services to the member agencies.

   - Provide Program management, contracting, accounting, and other administrative services, and produce reports on Program activities, expenditures, and performance
   - Facilitate the Policy and Management Committee meetings

   Task Evaluation: The evaluation for this task may include a review of the reporting processes and assessment of areas for possible improvement.

WATERSHED ASSESSMENT

Introduction

The Program's objectives for monitoring and assessment have evolved during its first ten years. Early monitoring emphasized testing stormwater, dry weather discharges and sediment to assess pollutant loads and stormwater impacts on San Francisco Bay.

However, in August 1996 the Regional Board staff requested that the Program and other municipal stormwater programs in the region redirect their monitoring resources from fixed-station, wet-weather monitoring, to increased watershed assessment and long-term monitoring plans for creeks and other waterbodies.

In November 1999 the Regional Board staff released the Regional Monitoring and Assessment Strategy (RMAS) that describes a regional framework and schedule for assessment of pilot watersheds by various agencies. A letter sent to stormwater agencies in February 2000 affirmed that their participation in the RMAS would meet the intent of NPDES permit's requirements for assessing watersheds and estimating pollutant loading. The letter supported a functional approach to watershed assessment, which would vary according to the conditions and beneficial uses found in each watershed. The Program has incorporated this approach into its Watershed Assessment component.

These assessments will vary depending on the condition of the watershed. Functional assessment of relatively undeveloped watersheds may focus on habitat and flow conditions needed to sustain fishery resources and other creek-dependent life.

In contrast, urbanized creeks are usually highly altered by land use changes in their watersheds, and assessment of such systems might focus on their ability to support existing uses, such as non-contact recreation and industrial water supply. In a report funded by the Program, Gunther et al. (2000) identified potential indicators or benchmarks for evaluating the condition of a creek's beneficial uses. These include measurements of individual pollutants, characterization of the amount and timing of creek flow, and surveys of diversity and composition of plant and animal communities living in creeks and adjacent riparian areas.

The Program's 1996-2001 Plan included activities aimed at exploring waterbody-specific approaches for improving water quality and increasing awareness and stewardship by local residents. Experiences from these pilot watershed activities have led to development of the Alameda County Watershed Framework. The Watershed Framework is a working document that describes potential roles for the Program, member agencies, and others in local watershed efforts.

The Watershed Assessment component includes activities to coordinate, manage and present watershed-specific information and spatial data. Component tasks also include refining a suite of indicators of creek health and tailoring the content and presentation of data to make it more useful to managers and other stakeholders of local watershed-based initiatives. Activities under the

Monitoring and Special Studies component continue to include monitoring pollutant trends, evaluating the effectiveness of BMPs, and conducting special studies that have regional scope or are applicable to multiple watersheds. Coordination and facilitation of watershed-based activities are incorporated into the Planning and Regulatory Compliance component.

Component Objectives

1. Develop and maintain a GIS resource for watershed information
2. Use a variety of indicators to assess the functional condition of creeks and watersheds.
3. Provide useful watershed information to the Program and other watershed stakeholders
4. Evaluate component effectiveness

Major Tasks

1. **Develop and Maintain GIS for Watershed Information:** A Geographical Information System (GIS) is the most effective way to manage and analyze complex and diverse types of watershed data. The Program initiated a GIS-based inventory of ten pilot watersheds in FY 2000/01, building on an existing system developed for the San Lorenzo Creek watershed by the District. The objective of this task is to build a coordinated resource for watershed information that can be used by the Program, its member agencies and other watershed partners.

    - Expand available countywide coverages through conversion and data sharing with other agencies
    - Develop task list and schedule for adding GIS data and tools based on priorities of Program and local watershed efforts
    - Maintain and update coverages, metadata standards and data-sharing agreements
    - Coordinate with Program members, Monitoring and other Program components to incorporate additional data types
    - Coordinate with the Monitoring and Special Studies component to integrate stormwater and sediment monitoring databases and establish protocols for linking rainfall and flow data

    Task Evaluation: The evaluation of this task may include 1) review of completeness and quality of GIS coverages; and 2) evaluation of levels of participation in data-sharing by members and other agencies

2. **Characterize Functional Attributes of Creeks and Potential for Stormwater Impacts:** Beneficial uses, such as fisheries and wildlife, depend on natural ecosystem functions of creeks which link physical and chemical processes with biological populations of animals and plants, both in the creek channel and in the watershed as a whole. Because these systems are complex, watershed managers seek quantifiable indicators that may be applied over a range of conditions to help screen and characterize problems. Regional and national proposals for various indicators must be evaluated, calibrated and

refined for use in Alameda County creeks.

- Establish expected values for selected biological indicators (e.g., macroinvertebrates and fish) in relatively natural channels
- Explore ranges of application of additional measures of creek function, e.g., habitat, riparian buffers, and alterations to flow regime
- Promote consistent, effective indicator application among the Program, its members and other partners including volunteer monitors.
- Coordinate with regional initiatives and assessment strategies

Task Evaluation: The evaluation of this task may include 1) review of where various indicators have been applied; and 2) evaluation of indicators' consistency and usefulness in guiding management in pilot watersheds.

3. **Provide Useful Information To Assist Watershed Management Efforts:** As the General Program and its member agencies increase their participation in local stakeholder meetings and watershed management groups, specialized assessment needs will arise. Effective information presentation and data reporting may require tailoring to a variety of audiences ranging from agency workers to regulators and community groups. Products might include guidance on GIS mapping approaches, supporting materials for grant applications, and "report cards" or descriptions of constraints and opportunities for watershed management.

- Continue inventory and assessment of the pilot group of creek segments or lakes, and establish a plan for assessing other creeks or lakes within the County
- Work with member agencies and other watershed stakeholders in mapping and identifying data needs for individual watersheds
- Explore ways to inventory existing patterns of BMP application and other localized spatial data
- Develop models for data presentation for different types of representative watersheds
- Present watershed and other spatial data on the Program website and provide user-friendly guidance for its use
- Coordinate data definitions and data management structures through regular meetings with the Regional Board staff, BASMAA Monitoring Committee, and other partners
- Compile assessment data requested by Regional Board staff for water quality assessment reports (Clean Water Act section 305(b))

Task Evaluation: The evaluation of this task may include 1) evaluation of overall assessment effort; and 2) review of form, content and distribution methods for assessment information products, with comments and feedback from partners and other data users.

4. **Management and Evaluation of Component Effectiveness:** The Program will prepare reports, budgets and other items to assist with management and implementation of this component. The effectiveness of implementation will be evaluated as part of the annual report. Annual activities and work plans will be guided by (a) priorities and objectives developed under task 1; and (b) annual review of Watershed Management-related tasks conducted under the Planning and Regulatory Compliance component. Implementation of this component will initially focus on establishing a GIS resource (Task 1), and emphasis will gradually shift to providing other useful data to stakeholders.

   Task Evaluation: The evaluation of this task may include 1) review of progress towards goals in the long-term strategy; and 2) comments and feedback from Program's Management Committee.

MONITORING AND SPECIAL STUDIES

Introduction

Since its inception, the Program has tried to improve its understanding of stormwater pollution and to develop effective ways to control pollutants through monitoring and related activities. It has participated in the Regional Monitoring Program for Trace Substances (RMP), which monitors water and sediment in the Bay, and it has also conducted testing of stormwater and sediment at an array of fixed storm drain and creek stations throughout the urbanized portion of the county. This monitoring helped to identify a number of pollutants of concern that could be impairing the bay and urban creeks. Current knowledge about these pollutants, and the evolving strategies for addressing them, are described in Section 4 (Pollutants of Concern) and the Pollutant Reduction Plans in Appendix C.

In 1996, the Regional Board staff directed the Program to cease fixed-station wet-weather monitoring and redirect resources to watershed assessment and development of the long-term monitoring strategy for creeks. A draft plan for Long Term Monitoring and Assessment (Gunther et al., 2000) identified the need to link Program monitoring objectives more closely to beneficial uses of waters. Because of the wide range of watershed factors that can affect a waterbody's ability to support beneficial uses, a separate Watershed Assessment component has been developed to collect and manage complex spatial data. Monitoring and Special Studies component tasks will focus on the occurrence, long-term trends and control strategies for pollutants of concern, including the development of a long-term monitoring work plan for representative urban creeks.

The Program has conducted a variety of special studies to refine information needed to implement the requirements of previous Plans. Examples include studies of the effectiveness of specific BMPs, the use of Toxicity Identification Evaluations to identify diazinon as a probable source of toxicity in urban creeks, and studies to better identify the sources of diazinon and other pollutants.

The Program will continue to identify information gaps and conduct special studies on stormwater pollution to fill these gaps. These studies can be grouped into two categories: 1) studies focused on the pollutants of concern and other widespread pollutant problems; and 2) studies of pollutants responsible for more localized problems, such as litter and construction-related discharges. The implementation of BMPs to address pollutants that are local problems may need to be tailored to physical, social or jurisdictional conditions in specific watersheds. The evaluation of the effectiveness of these BMPs may need to consider conditions as well.

Component Objectives

1. Improve characterization and tracking of pollutants of concern that are found in stormwater
2. Evaluate the effectiveness of stormwater BMPs
3. Provide technical information to member agencies about pollutants

that may cause localized stormwater problems
4. Coordinate planning and reporting with related monitoring efforts
5. Evaluate component effectiveness and develop ways to measure the Program's effectiveness over time, including information on cost effectiveness

Major Tasks

1. **Characterize Concentrations and Long-Term Trends for Pollutants of Concern:** Section 4 (Pollutants of Concern) describes several pollutants that the Regional Board or U.S. EPA have identified as causing impairment of the bay or local creeks. Because the Regional Board needs to develop TMDLs for these pollutants it will require the Program's assistance in developing information about pollutant loading and changes in pollutant concentrations that result from the implementation of Pollutant Reduction Plans (Appendix C) and TMDLs. Past monitoring experience indicates that stormwater testing is useful for characterizing some constituents, and it will be continued at a long-term site on Castro Valley Creek. The Program will also sample sediment from creek beds, which is useful for surveying the occurrence of pollutants that are associated with fine particles.

   Activities for this task are described in the Annual Monitoring Work Plans submitted to the Regional Board. In addition to participating in coordinated regional data collection, the Program will develop a strategy for creek monitoring that incorporates the following objectives:

   - Review existing stormwater and sediment data to select effective sampling methodologies
   - Evaluate long-term trends in pollutant concentrations and toxicity in urban runoff
   - Establish expected baseline concentrations of mercury, PCBs and targeted organochlorine pesticides in sediment of creeks and storm drains and estimate loadings using available total suspended solids and discharge data.

   The Program has a database with the results of the fixed-station stormwater and sediment monitoring results collected during 1988-1995. This database will be updated with pollutant data from relevant special studies conducted by the Program and other local entities. Additional database modules for yearly rainfall patterns and flow history for one or more benchmark sites will be added to assist with assessment of long-term trends in water quality. Objectives for improving data interpretation include:

   - Incorporate grab sampling, rainfall and other types of data into the existing database
   - Facilitate linkages among pollutant concentrations, rainfall and spatial GIS data

   Task Evaluation: The evaluation of this task may include review of the Program's effectiveness in identifying long-term pollutant trends.

2. **Characterize Sources and Evaluate BMP Effectiveness for Pollutants of Concern:** Sources of pollutants must be understood in order to develop effective pollutant reduction measures. The impairments caused by the Pollutants of Concern are generally widespread because of the ubiquitous nature of the pollutants and the transport of many of these pollutants through the atmosphere. Because of the regional nature of these pollutants, the Program will need to coordinate closely with the Regional Board staff and with other BASMAA agencies. This task may involve a range of activities, including:

   - Special studies of specific watersheds with high pollutant concentrations
   - Special studies of sources or pathways
   - Modeling pollutant transport in runoff
   - Participation in coordinated regional studies such as the North Bay Copper Study
   - Participation in national pollutant prevention initiatives such as the Brake Pad Partnership

   Program members have implemented a variety of BMPs, but information about their effectiveness is not always readily available. While the new permit may incorporate additional provisions for treating runoff from new development, past studies by the Program and other stormwater agencies have shown that the effectiveness of treatment devices varies according to site-specific conditions. Evaluation of overall BMP effectiveness may necessitate evaluations of:

   - Structural treatment controls
   - Pollutant control tasks listed in the Pollutant Reduction Plans, such as fluorescent bulb recycling for mercury source control

   Task Evaluation: The evaluation of this task may include 1) tracking changes in the level of understanding of pollutant sources and controls; and 2) identifying ways to improve the effectiveness and application of BMPs.

3. **Assist Local Watershed Managers in Identifying Localized Stormwater Impacts and Provide Tools for Addressing These Impacts:** In contrast to the pollutants described in Section 4, some pollutants mainly affect waters nearby the source of the pollutant's release. Some beneficial uses, such as contact and non-contact recreation, are very location specific. Assessing stormwater impacts on these beneficial uses may involve a variety of site-specific factors, and the member agencies play a large role in choosing which specific factors and management objectives they would like better understood through studies. High-priority objectives identified by the Watershed Assessment and Monitoring Subcommittee include:

   - Evaluate toxicity or other impacts on bay fisheries
   - Characterize sediment and litter problems
   - Evaluate fecal coliforms and other indicators of human

health risk for light contact recreation areas
- Provide technical assistance to local watershed managers by providing data and guidance information

Task Evaluation: The evaluation of this task may include 1) review of successes and limitations of various approaches to managing localized issues under different conditions; 2) assess feedback from the Program's member agencies and other users about the effectiveness of Program-produced data and guidance materials.

4. **Coordinate with and Support BASMAA and Other Regional Monitoring Efforts:** The Regional Monitoring Program (RMP) is a collaborative effort to monitor the condition and health of San Francisco Bay. The Program, along with other NPDES-permitted dischargers, contributes to this effort annually. In addition, the BASMAA Monitoring Committee has worked with the Regional Board staff to establish the following three priorities for regional coordination of information: watershed assessment; BMP effectiveness; and characterization of pollutant loads and potential sources. The Program's participation in these regional activities increases opportunities for collaboration and coordination with other stormwater agencies.

   - Continue participation in the RMP
   - Participate in BASMAA Monitoring Committee and other regional monitoring groups
   - Explore monitoring partnerships with other agencies and organizations

   Task Evaluation: The evaluation of this task may include a review of useful information exchanged and partnerships that are initiated or enhanced.

5. **Management and Evaluation of Component Effectiveness:** The Program will prepare reports, budgets and other items to assist with management and implementation of this component. The effectiveness of implementation will be evaluated as part of the annual report.

   - Coordinate annual work plans to reflect the priorities of the Program's Long-Term Monitoring Plan
   - Promote cost-effective monitoring by designing data collection to meet multiple monitoring objectives, where possible.
   - Facilitate and support the Watershed Assessment and Monitoring Subcommittee meetings

   Task Evaluation: The evaluation of this task may include 1) a review of work plan development process; and 2) evaluation of accomplishments against Program objectives.

PUBLIC INFORMATION AND PARTICIPATION

Introduction

Most people are unaware that the largest source of pollutants to local creeks, lakes and the bay comes from the stormwater that flows off the cityscape picking up drops of motor oil, brake pad dust, exhaust emissions, pesticides, dirt and litter and, in most cases, receiving no treatment. These sources of pollutants result from the small, incremental and collective activities of everyone in Alameda County. Public information and participation is one of the keys to preventing stormwater pollution. The better that everyone understands the importance of stormwater pollution, their own, often unintentional, contribution to the problem, and simple things that we can do about it, the cleaner our creeks and the bay will become.

This component of the program focuses on providing information to residents in order to enlist their help in preventing stormwater pollution. The Public Information and Participation Subcommittee oversees this component's activities. This subcommittee is also responsible for ensuring the consistency of terminology, format and style among all of the Program's educational outreach efforts.

A summary of the progress being made in public awareness is described in the Program Description Section under Program Achievements.

Component Objectives

1. Educate residents about stormwater pollution problems.
2. Encourage residents to adopt less polluting and more environmentally beneficial behavior.
3. Assist member agencies with watershed awareness efforts and provide stewardship opportunities.
4. Improve public information and participation effectiveness through partnering with other organizations.
5. Evaluate component effectiveness and make improvements.

Major Tasks

1. **Implement Targeted Outreach:** The Clean Water Program has been working with other municipal stormwater agencies through BASMAA to identify categories of pollutants and pollutant generating behavior to target as part of regional advertising and action campaigns. This pooling of resources has helped to generate more effective campaigns than could be achieved by working independently.

   It is anticipated that future targeted campaigns will focus on helping to implement the Pollutant Reduction Plans for specific water quality impairing pollutants. The pollutants that appear to be priorities on the Regional Board's list include mercury, PCBs and dioxin compounds, and pesticides (diazinon, chlordane, dieldrin and DDT). Another possibility would be to develop and implement a countywide anti-littering campaign. The campaigns will focus primarily on targeting

residential sources and encouraging residents to prevent pollution.

The Public Information and Participation (PIP) Subcommittee will develop and update a list of priorities for helping to select future campaigns. Criteria for the selection of priorities will include that a significant portion of the pollutant-generating behavior originates from residents. It will be important to continue to evaluate the effectiveness of each campaign and not to focus too much on the same type of pollutant or category of pollutants.

The General Program will also collaborate with groups such as the Bay Area Air Quality Management District, the Alameda County Waste Management Authority, Home Builders Association of Northern California, and other groups to expand the impact of any targeted outreach.

2. **Continue to Reinforce General Outreach Messages:** Existing PIP materials that the PIP Subcommittee determines are useful enough to continue in circulation will be updated, as needed, and reprinted or produced for each agency to distribute and for distribution by the General Program on its website and through other methods. The PIP Subcommittee may choose to have more of the existing materials translated into additional languages, if this has been identified as an effective way to reach groups whose primary language is not English. The continued reinforcement will also occur through increased collaboration with other public agencies and private organizations with common interests.

3. **Provide Educational Support and Watershed Stewardship Support:** This task will include helping to educate students about stormwater pollution prevention and related environmental issues. The General Program has actively supported a number of school focused educational endeavors, including Bay Savers (targeted to fourth graders), Kids in Creeks/Gardens/Watersheds (targeted to teachers) and Estuary Action Challenge. The PIP Subcommittee will decide at least every two years which educational activities to support based on the known or expected effectiveness of the activity and how well it addresses the objectives of the PIP component.

   This task will also involve continued support for the Community Stewardship Grant program.

   Lastly, this task will include training for member agency staff responsible for PIP. This training may also be expanded to include other targeted groups such as was done with the *East Bay Watershed Management Symposium* in 1998 and *Turning the Tide: Balancing New Development and Clean Waters* symposium in 2001.

4. **Assist Member Agencies Implement and Improve the Performance Standards:** This task will include assisting the member agencies to implement their PIP performance standards. This assistance may include undertaking any project that will

result in additional tools and means for the member agencies to better implement the performance standards. In the past this has included such things as purchasing kiosk displays and dioramas for the member agencies to use at public events.
This task will also include review and, if needed, improvement in the performance standards at least every two years. This review will occur as part of PIP Subcommittee meetings. The evaluation information collected as part of Task 5 will be used to decide how and where to make improvements.

5. **Manage Component and Evaluate and Improve Its Effectiveness:** The General Program will assist the PIP Subcommittee and its work groups to conduct its meetings and prepare any needed NPDES permit required reports and work plans. This task will also include assisting with the development of annual General Program component work plans and budgets.

   The effectiveness of this component will be evaluated as part of the following types of activities, which are offered as examples:

   - Conduct a public awareness survey similar to the one conducted in 2000.
   - Evaluate the information being submitted as part of the annual reports.
   - Survey member public agencies to obtain information about how well this component and the performance standards are working.
   - Evaluate the Regional Board staff's reviews of the Clean Water Program's performance in this area.
   - Review information collected elsewhere of tangible progress. This may include tracking changes in behavior based on pre and post- campaign surveys paid through participation in BASMAA.

   The PIP Subcommittee as part of developing its annual work plan and budget will consider improvements to the General Program at least annually.

MUNICIPAL MAINTENANCE ACTIVITIES

Introduction

Municipal maintenance staff comprises one of the largest group's of public employees whose everyday work sweeping and repairing streets, cleaning storm drains, and applying herbicides can directly help to prevent stormwater pollution. In addition, the hundreds of maintenance field personnel play an essential role in reporting on illicit discharges and pollution problems that need to be fixed. The maintenance staff also helped to spread the word about stormwater pollution prevention among its maintenance counterparts in other public agencies.

The Maintenance Subcommittee, which is one of the oldest in the Program, is responsible for helping to implement this component's activities.

Component Objectives

1. Optimize pollutant removal during routine maintenance activities such as street sweeping and maintenance of storm drainage facilities.
2. Prevent or minimize discharges to storm drains and watercourses from road maintenance, parks, corporation yards and other publicly owned facilities.
3. Provide information and education about the Alameda Countywide Clean Water Program to agency employees.
4. Evaluate component effectiveness and make improvements.
5. Facilitate reporting.

Achievements

One of the accomplishments of the Program has been to reach a consensus among the member agencies on how to implement the diverse activities involved in municipal maintenance so as to minimize the stormwater pollution. This resulted in the development of performance standards for street cleaning; storm drainage and watercourse maintenance; litter control; road repair and maintenance; and corporation yard operations.

One of the core maintenance areas has been the use of street sweeping to remove potential pollutants prior to their being flushed into local creeks and the bay. All of the municipalities report their street sweeping and storm drainage cleaning activities on a standardized monthly form. In Fiscal Year 1999/00 the collective street sweeping effort of all of the municipalities resulted in the sweeping of about one quarter of a million curb miles of street with the removal of over 78,000 cubic yards and 1,000 tons of material. These amounts are similar to what has been achieved in most recent years, except during the El Nino year in 1998 when the amount of material removed by sweeping was reduced probably because the persistent rains flushed material away before it could be swept up.

The Program has well attended annual training workshops for municipal maintenance staff. During the last three years this training has been augmented creatively by the sweeper rodeo and similar events to demonstrate Best Management

Practices usage in an engaging manner. In addition, in 2000 the Program hosted an educational outreach workshop that was attended by representatives from public agencies outside of the Program and by PG&E.

Major Tasks

1. **Implement and Assist with Performance Standards:** Each agency will implement the municipal maintenance performance standards presented in Section IV. The performance standards include the following major activities:

    - Street Sweeping
    - Storm Drain Cleaning
    - Training
    - Reporting

    The General Program will work through the Maintenance Subcommittee to resolve implementation and consistency issues.

2. **Coordinate Maintenance-Related Activities with Other Subcommittees of the ACCWP, Other Agencies and Private Industries**: The subcommittee will work with appropriate staff from other Subcommittees of the ACCWP, park and recreation departments, and other public agencies and private industries whose activities are similar to or potentially affect municipal maintenance activities to identify activities of concern. Examples of other public agencies and private industries include PG&E, water suppliers and utilities, garbage collection companies, the Port of Oakland, golf courses, private recreational facilities and animal confinement areas.

3. **Optimize Data Management and Analysis**: The General Program will optimize ongoing collection, recording and analysis of maintenance data. This will include continuing to evaluate if the types of maintenance data being collected are useful and if other types of data should be collected. Examples of potential studies and data analysis include the following:

    - Leaf collection programs
    - Litter abatement programs

4. **Outreach and Training:** The General Program will facilitate outreach and training activities aimed at preventing discharges from maintenance activities, with direction from the Maintenance Subcommittee. This includes selecting the appropriate forum (e.g., workshops, round table meetings, work groups, inter/intra-agency coordination meetings, etc.) depending on the target audiences (e.g., ACCWP agencies, other agencies, property owners, residence, etc.). The Maintenance Subcommittee will also coordinate outreach activities with other ACCWP Subcommittees when the objectives of a planned outreach and training activity conducted by the Maintenance Subcommittee overlap with the objectives of another Subcommittee.

    The Maintenance Subcommittee will identify a target audience at least once every two years; the Subcommittee will select the appropriate forum for the outreach depending on the selected audience.

The General Program will develop and update materials (such as BMP flyers, brochures, posters, etc.) that are needed to support outreach and training activities, as determined by the Maintenance Subcommittee.

5. **Manage Component and Evaluate and Improve Its Effectiveness:** The General Program will assist the Maintenance Subcommittee and its work groups to conduct meetings and prepare any needed NPDES permit reports and work plans related to this component. This includes assisting with the development of annual General Program budgets. The following activities are examples of how the effectiveness of this component may be evaluated:

   - Survey member agencies to obtain information about how well this component and the performance standards are working.
   - Evaluate the information being submitted as part of the annual reports.
   - Evaluate the Regional Board staff's reviews of the Clean Water Program's performance in this area.

NEW DEVELOPMENT AND CONSTRUCTION CONTROLS

Introduction

New development offers a unique opportunity to construct projects that prevent stormwater pollution. Historically projects were constructed by building up to or over culverted creeks, constructing drainage ways to convey runoff off of project sites quickly, and ignoring opportunities to prevent or treat stormwater runoff. These developments lead to the destruction of flood plains and alterations in the natural structure and function of creeks, as well as to increases in the amount of stormwater pollution.

Better ways to design and construct new projects have received a considerable amount of attention in recent years. In 1994 the Regional Board staff developed its *Staff Recommendations for New and Redevelopment Controls for Storm Water Programs.*

The concepts in this document were used to develop the performance standards for New Development. In 1998 the Program and other Bay area municipal stormwater programs developed through BASMAA the *Start at the Source* manual. This manual describes a comprehensive approach to planning environmentally sensitive developments that minimize increases in the amount of impervious cover and combine stormwater treatment systems into the landscaping. Additional models will be developed as part of meeting the new Standard Urban Stormwater Mitigation Plan requirements described in the Background Section under Recent Developments.

Component Objectives

1. Identify and help implement source controls, site design measures and post-construction stormwater pollutant and hydromodification controls.
2. Assist with incorporating controls on impairing pollutants prior to and following completion of load and waste load allocations as part of a Total Maximum Daily Loads process.
3. Ensure that public works construction and maintenance projects conform to the same standards as private projects.
4. During construction promote the use of controls to reduce the discharge of pollutants to the maximum extent practicable and effectively control non-stormwater discharges.
5. Evaluate component effectiveness and make improvements.

Achievements

The Clean Water Program has emphasized the development of tools to help implement this component of the Stormwater Quality Management Plan. This included developing suggested Conditions of Approval for residential, commercial and industrial developments and compiling a *Catalog of Structural Stormwater Quality Control Measures.* Training focused on Planning Commissioners and individual municipality planning and engineering staffs. Municipalities have begun to implement the *Start at the Source* types of stormwater design measures. This has included the use of

grassy swales at residential, commercial, industrial and public works developments in a number of cities and the District's construction and operation of a stormwater treatment pond draining about 500 acres of residential area in Fremont. With assistance from the Regional Board staff, other areas of emphasis have included improving controls on erosion and sedimentation and preventing the releases of construction related discharges.

Major Tasks

1. **Identify How To Implement Source, Site Design, Post-Construction Stormwater Treatment and Hydromodification Controls:** As part of the previous Stormwater Management Plan, the Clean Water Program emphasized the use of pollutant source controls and site planning measures, such as those found in the *Start at the Source* manual. The Regional Water Quality Control Board and municipal planning staff are interested in specifying more clearly how source, design, treatment and hydromodification controls need to be used as part of the maximum extent practicable control of pollutants from stormwater.

   This task will include the following activities:

   - Review the Santa Clara Valley Urban Runoff Pollution Prevention Program's work on implementing its new permit requirements that address these types of controls. This will also include identifying and reviewing useful approaches of other municipal stormwater programs in California and elsewhere.
   - Identify and work with a stakeholder group to develop a method for appropriately integrating pollutant and hydromodification controls as requirements for new development.
   - Submit the Clean Water Program's agreed upon method for implementing pollutant and hydromodification controls to the Regional Board staff and, based on feedback, make any needed changes.
   - Identify assistance that the Clean Water Program's member agencies will need in order to implement the new, agreed upon controls.
   - Every two years review and, if appropriate, improve the agreed upon controls based upon implementation experience and other new information.

   Task Evaluation: The evaluation of this task may include 1) determine whether the General Program was able to achieve consensus among the stakeholders regarding the new controls and 2) obtain feedback from the Regional Board staff on how well the agreed upon controls met its expectations.

2. **Help Implement Source, Site Design, Post Construction Stormwater Treatment and Hydromodification Controls:** This task will include assisting the member agencies to implement the agreed upon more specific pollutant and hydromodification controls. This may include the following types of activities, which are offered as examples:

- Modify and improve the performance standards to incorporate the agreed upon control methods.
- Develop and update the Conditions of Approval, development guidance and review checklists.
- Track and discuss at New Development Subcommittee meetings municipal case studies of new development/redevelopment projects that are illustrative of successes, problems and questions about the control method.
- Develop guidance on cost-effective ways to implement the controls, such as, updating the "Project Worksheet for Permanent Stormwater Quality Controls."

Task Evaluation: The evaluation of this task may include: 1) assess the information being submitted as part of the annual reports; 2) obtain feedback from the municipalities about how successful the implementation of the controls has been; and 3) survey builders on how helpful the more specific controls and implementation tools have been and ways that they can be improved.

3. **Assist with the Development of Watershed Information and Facilitate Its Use:** This task will involve identifying the watershed information needs of the member agencies so that this information may be collected for use by agency planning and engineering staff. The actual collection of most watershed information will be conducted as part of the Watershed Assessment component. This task will also include assisting the member agencies with the use of watershed information that has been collected.

   Task Evaluation: The evaluation of this task may include a survey of the agencies' planning and engineering staffs to see how well their watershed information needs were met.

4. **Promote Outreach and Training:** This task will include reinforcing and expanding educational outreach to agency planning and engineering staff, Planning Commissions, City Councils, builders, and builders' consultants and contractors. The next wave of this outreach and training will focus on helping everyone to understand and implement the more specific pollutant and hydromodification controls developed as part of Task 1. This outreach and training will include the following:
   - Conduct at least one outreach and/or training event annually that is targeted to either agency staff or to the building industry. This may be conducted in collaboration with other agencies, organizations or groups.
   - Develop and distribute outreach material that goes beyond the trifolds that have been developed in the past.
   - Compile and distribute, in binders, to agency staff copies of all of the guidance and educational material that have been developed by the subcommittee.
   - Develop and maintain a mailing list of designers,

builders, developers that may be used by member agencies to do outreach.

Task Evaluation: The evaluation of this task may include 1) the number of staff trained from each of the targeted groups; and 2) summaries of the feedback obtained from recipients of training and outreach.

5. **Manage Component and Evaluate and Improve Its Effectiveness:** The General Program will assist the New Development Subcommittee and its work groups to conduct its meetings and prepare any needed NPDES permit required reports and products. This task will also include assisting with the development of annual General Program work plans and budgets. As part of developing the annual work plan and budgets, the New Development Subcommittee will consider ways to improve the General Program.

   Task Evaluation: The evaluation of this task may include: 1) review how well the municipalities are meeting the new NPDES permit requirements that affect new development and redevelopment, this may include summarizing the Regional Board staff's reviews of member agency performance in this area; and 2) review information collected elsewhere of tangible progress, such as changes in environmental indicators developed by the Stormwater Environmental Indicators Pilot Demonstration Project in Santa Clara Valley.

ILLICIT DISCHARGE CONTROLS

Introduction

One of the most visible reasons for having a Program is to eliminate pollution caused by materials being poured, spilled, dumped, washed, or discharged into the municipal storm drain system. One of the Clean Water Act's few explicit stormwater dictates is that permits include a "requirement to effectively prohibit non-stormwater discharges into the storm" drain systems. The federal regulations allow the discharge of some minor types of non-stormwater discharges, such as under specified conditions.

The Program has been proactive in identifying and eliminating illicit discharges to the municipal storm drain system. This has included enlisting the help of each agency's municipal maintenance and other field staff who are most likely to see what is being discharged to the storm drain system or dumped where it may become waterborne. A brief summary of the progress being made is described in the Achievements section below.

Component Objectives

1. Control illicit discharges by conducting field surveys of the municipal storm drainage conveyance system and identifying and eliminating the sources of non-stormwater discharges.
2. Effectively coordinate spill response and clean-up with existing programs.
3. Optimize illicit discharge control activities through planning and prioritization.
4. Address discharges that may not be considered illicit if properly managed.
5. Partner with other Subcommittees, agencies, and groups to increase public awareness on how to effectively and efficiently prevent pollutant discharges to the storm drains.

Achievements

The Program has conducted several training workshops for illicit discharge inspectors to improve member agencies' familiarity with Best Management Practices for identifying and eliminating illicit discharges. In 1995 the Program developed a standardized form for documenting illicit discharge findings and controls. This systematic approach has helped to identify the predominant types of illicit discharges so that additional, targeted educational outreach could be undertaken.

Since 1995 the member agencies have identified and eliminated approximately 5,000 illicit discharges. During this period the number of illicit discharges being found each year has about doubled and the number of illicit discharges that led to enforcement has approximately quadrupled. The increase in the number of illicit discharges being found may reflect an improvement by illicit discharge inspectors, maintenance staff, outside agency staff and the general public in identifying and reporting illicit discharges incidents.

Major Tasks

1. **Implement and Assist with Performance Standards:** Each agency will implement the performance standards specified in Section 5 for illicit discharge control activities. The performance standards include the following major activities.
   - Developing a five-year Action Plan for conducting field surveys of the agency's watershed.
   - Conducting field surveys.
   - Investigating illicit discharge reports and conduct appropriate follow-up.
   - Effectively eliminate illicit discharges through education and enforcement.

   The Industrial & Illicit Discharge Control (I&IDC) Subcommittee will review the performance standards at least every two years and make any needed improvements. The General Program will work through the I&IDC Subcommittee to resolve implementation and consistency questions.

2. **Assist Member Agencies Comply with Requirements for Conditionally Exempt Non-Stormwater Discharges:** The General Program will continue to facilitate compliance with non-stormwater discharges identified in the NPDES permit as conditionally exempt from discharge prohibitions to the storm drains. The General Program will work through the I&IDC Subcommittee and its work groups to identify effective control measures. The General Program will also facilitate the process for adding any non-stormwater discharges identified to the list of conditionally exempt non-stormwater discharges, and developing the appropriate BMPs.

3. **Track and Analyze Non-stormwater Discharge Reports:** Each agency submits quarterly summary reports on illicit discharge control activities as described in the performance standards. The General Program will collect and analyze this information for trends and other useful information to better plan and help improve illicit discharge control program activities, with direction from the I&IDC Subcommittee. For example, information on non-stormwater discharges can be used to identify needs for additional information or to develop discharge elimination/disposal priorities for categories of discharges.

4. **Conduct Outreach and Training:** The General Program will facilitate outreach and training activities to prevent illicit discharges, with direction from the I&IDC Subcommittee. This includes selecting the appropriate forum (e.g., workshops, round table meetings, work groups, inter/intra-agency coordination meetings, etc.) depending on the target audiences (e.g., ACCWP agencies, other agencies, property owners, residences, etc.). The I&IDC Subcommittee will also coordinate outreach activities with other ACCWP Subcommittees when the objectives of a planned outreach and training activity conducted by the I&IDC Subcommittee overlap with the objectives of another

Subcommittee. For example, the I&IDC Subcommittee will coordinate with the Watershed and Monitoring Subcommittee when conducting outreach activities that address pollutants targeted in Pollutant Reduction Plans.

The I&IDC Subcommittee will better define and identify the target audience at least once every two years; the Subcommittee will select the appropriate forum for the outreach depending on the selected audience. The General Program will develop materials (such as BMP flyers, brochures, posters, etc.) that are needed to support outreach and training activities, as determined by the I&IDC Subcommittee.

5. **Manage Component and Evaluate and Improve Its Effectiveness:** The General Program will assist the I&IDC Subcommittee and its work groups to conduct meetings and prepare any needed NPDES permit reports and work plans related to this component. This includes assisting with the development of annual General Program budgets. The following activities are offered as examples of how the effectiveness of this component may be evaluated.
   - Evaluate the information being submitted by ACCWP agencies as part of the annual reports.
   - Coordinate with the PIP Subcommittee to survey the general public on illicit discharges and BMPs to prevent the discharge of pollutants.
   - Evaluate the Regional Board staff's reviews of the Program's performance in this area.

INDUSTRIAL/COMMERCIAL DISCHARGE CONTROLS

Introduction

The prevention and control of stormwater pollution from commercial and industrial businesses is one of the major activities of the Program. The Program emphasizes educating businesses about methods to prevent and control stormwater pollution. Educational outreach to businesses has occurred primarily during facility inspections and through working with trade and business organizations on identifying appropriate Best Management Practices.

Educational outreach materials for the automotive repair shops and restaurants, the two most common businesses countywide, has included the development of brochures, posters, and flyers. In addition, there are manufacturers and other more industrial types of businesses that are required to have coverage under the California Industrial Stormwater NPDES General Permit. Since the municipalities are required to control any type of stormwater that discharges to their municipal storm drain system, the municipalities do not treat one type of business differently than another.

The Industrial & Illicit Discharge Control Subcommittee is responsible for overseeing the implementation of this component and the Illicit Discharge Controls component.

Component Objectives

1. Reduce the amount of pollutants in stormwater runoff to the maximum extent practicable from industrial and commercial facilities.
2. Eliminate effectively non-stormwater discharges from industrial and commercial facilities to the municipal storm drain system.
3. Identify and eliminate potential stormwater pollution sources through facility inspections, outreach activities, and appropriate follow-up including enforcement.
4. Provide incentives, both positive and regulatory, for businesses to comply with stormwater requirements.
5. Evaluate component effectiveness and make improvements.

A summary of the progress being made in preventing and controlling businesses' contribution to stormwater pollution is described in the Program Description Section under Program Achievements.

Major Tasks

1. **Implement and Assist with Performance Standards:** Each agency will implement the performance standards specified in Section 5 for industrial/commercial discharge control activities. The performance standards include the following major activities.
   - Developing a five-year Inspection Plan and an annual Inspection Workplan for conducting business inspections.
   - Conducting business inspections.
   - Conducting outreach and enforcement to businesses to obtain compliance.

   The five-year Inspection Plan is a one-time permit requirement. Each agency will

describe its industrial and commercial base, as well as business inspection priorities and procedures. The description will include an estimate of the number of industrial and commercial sites requiring inspection for the five-year permit period and the numbers of facilities under each business type.

The Industrial & Illicit Discharge Control (I&IDC) Subcommittee will review the performance standards at least every two years and make any needed improvements. The General Program will work through the I&IDC Subcommittee to resolve implementation and consistency questions.

2. **Develop BMP Guidance:** With direction from the I&IDC Subcommittee, the General Program will develop materials to support illicit discharge control and industrial/commercial discharge control activities. This includes identifying target audiences and the format (e.g., brochures, flyers, checklist, poster, etc.) of the guidance material best suited for the target audience.

3. **Track and Analyze Facility Inspection Reports:** Each municipality submits inspection information on the standard report form as described in the performance standards. The General Program will continue to collect and analyze this information for trends and other useful information to better plan and help improve business inspection, outreach, and enforcement activities, with direction from the I&IDC Subcommittee. For example, information on the potential to discharge pollutants can be used to identify priority businesses for the following year's inspection or outreach activities.

4. **Conduct Outreach and Training:** The General Program will facilitate outreach and training activities to prevent pollutant discharges from business activities, with direction from the I&IDC Subcommittee. This includes providing incentives, both education/outreach and enforcement, for businesses to comply. The audience can include both agency and business groups or organizations. The I&IDC Subcommittee will also coordinate outreach activities with other ACCWP Subcommittees when the objectives of a planned outreach and training activity conducted by the I&IDC Subcommittee overlap with the objectives of another Subcommittee.

   The I&IDC Subcommittee will identify a target audience at least once every two years; the Subcommittee will select the appropriate forum for the outreach depending on the selected audience.

5. **Manage Component and Evaluate and Improve Its Effectiveness:** The General Program will assist the I&IDC Subcommittee and its work groups to conduct meetings and prepare any needed NPDES permit reports and work plans related to this component. This includes assisting with the development of annual General Program budgets. The following activities are offered as examples of how the effectiveness of this component may be evaluated:
   - Evaluate the information being submitted by ACCWP agencies as part of the annual reports.
   - Survey businesses on how the effectiveness of outreach and inspection activities described in this component and its performance standards.
   - Evaluate the Regional Board staff's reviews of the ACCWP's performance in this area.

SECTION 4 POLLUTANTS OF CONCERN

As a result of its 1998 assessment of water bodies in the Bay Area, the Regional Board listed San Francisco Bay as impaired due to the following pollutants: diazinon, mercury, polychlorinated biphenyls (PCBs), copper, nickel, chlordane, DDT, dieldrin, and selenium. The U.S. EPA subsequently added dioxin-like compounds as one of the bay's impairing pollutants; listed several creeks in Alameda County as impaired by diazinon; and listed Lake Merritt as impaired due to litter and low dissolved oxygen.

To address the contribution of these pollutants from stormwater, the Program is developing pollutant reduction plans (PRPs). PRPs provide a comprehensive list of actions the Program will take to further reduce the discharge of impairing pollutants that are the highest priority for the Regional Board: diazinon, mercury, copper, and PCBs (see Appendix C). This section of the Plan provides information on each of these pollutants, including, problem definition, sources, challenges, and the Program's approach to reducing the level of these pollutants in stormwater. Other pollutant reduction plans will be developed as needed.

DIAZINON

Problem Definition

Diazinon is a widely used organophosphate insecticide that has been detected in creeks throughout the Bay Area. During storm events, the concentration of diazinon in local creeks is often high enough to be toxic to some species of aquatic life. For example, 71% of stormwater samples collected from Bay Area creeks were lethal to a small crustacean, *Ceriodaphnia dubia*, and Toxicity Identification Evaluations (TIEs) have determined that diazinon was the primary cause of this toxicity (Katznelson, 1997). *C. dubia* is a standard U.S. EPA test species, and although it is not a resident species in local creeks, toxicity to *C. dubia* suggests that other aquatic insects that inhabit local creeks could also be adversely affected by the presence of diazinon. Based on the prevalence of stormwater toxicity and the results of the TIEs, the U.S. EPA listed Alameda, San Leandro, and San Lorenzo creeks as impaired by diazinon.

U.S. EPA has banned the sale of diazinon for urban use after 2004 due to concerns regarding potential environmental and human health impacts. However, the application of diazinon will be allowed to continue until the stock of diazinon sold prior to the end of 2004 has been depleted. Therefore, the level of diazinon in stormwater may continue to exceed toxic concentrations for several years after its sale is banned.

Diazinon is not the only insecticide found in Bay Area creeks. Other commonly used insecticides, such as chlorpyrifos, carbaryl, and malathion, also have been detected and may be contributing to toxicity. As diazinon and other insecticides such as chlorpyrifos are banned, other insecticides will be used in their place. The replacement

pesticides may cause equal or increased toxicity in stormwater discharges.

Sources

The primary source of diazinon in Alameda County creeks is stormwater runoff from urbanized areas. Diazinon is applied by both professional and non-professional applicators. About half of the estimated 30,000 pounds of diazinon used in Alameda County in 1995 was applied by residents who purchased the product at retail outlets. The remainder was applied by commercial pest control applicators. The most common target pests were ants, fleas, and spiders (Scanlin and Cooper, 1997).

Although improper use or disposal may account for some of the diazinon in stormwater, recent studies suggest that a major source is use in accordance with label directions (Scanlin and Feng, 1997). Only a small amount of pesticide causes toxicity in creeks, therefore, even proper use could account for the toxic concentrations observed. For example, Scanlin and Feng (1997) often observed toxic concentrations in a creek where it was estimated that only 0.3% of the diazinon used in a small, urbanized watershed ended up in the creek. This percentage of pesticide entering runoff is what would be expected for runoff from proper use. For example, Balogh and Walker (1992), in a study of agricultural runoff, estimated the maximum runoff rate for most pesticides under normal conditions at between 0.5% and 1% of the total quantity applied, and initial results of a study to assess diazinon runoff from urban sites suggests that pesticide runoff from these sites is of about the same proportion as in agricultural applications (ACCWP).

Challenges

There are major regulatory, economic, social and technical obstacles to significantly reducing the level of insecticides in stormwater runoff. Following is a brief description of some of these obstacles.

Regulatory Obstacles: Nationally, insecticides are regulated under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). The criterion for acceptability under FIFRA is that "the insecticide *does not cause unreasonable adverse effects* to people or the environment when it is used according to the product label directions and restrictions" [emphasis added]. Under FIFRA, the economic benefit is weighed against the environmental impact when determining what is "unreasonable". Under the Clean Water Act, however, the water quality standard is much more restrictive and is stated as "no toxics in toxic amounts". The effect of this discrepancy is that one office of U.S. EPA may allow the use of an insecticide, while another office may require the development of a TMDL to address a water quality impairment due to its use.

In California, the use of insecticides is also regulated by the California Department of Pesticide Regulation (CDPR), and with the exception of some very limited authority granted to the county agricultural commissioner, local government is prohibited from regulating insecticide use (section 11501.1 of the California Code of Regulations).

Economic Obstacles: Pest control is a big business. Based on the estimated 15,000 pounds of diazinon (active

ingredient) sold annually, retail sales in Alameda County are in the neighborhood of $250,000 annually for diazinon alone. In addition to retail sales, there are approximately 50,000 licensed applications of diazinon for structural and landscape pest control in Alameda County every year (Scanlin and Cooper, 1997). Assuming an average per-application cost of $50, this use would generate over $2 million annually. Considering the financial resources available to the pesticide industry, it would be difficult for the Program to compete effectively through the use of public outreach/advertising.

Social Obstacles: Some people do not like bugs, and view one spider or ant around their house as one too many. This strongly ingrained perception is difficult to alter. Many people will still choose to use insecticides even if they are aware of the harm it causes aquatic ecosystems.

Technical Obstacles: Preventing the improper use or disposal of diazinon will not solve the problem. Previous and ongoing studies (Scanlin and Feng, 1997; and ACCWP) indicate that a significant portion of diazinon applied according to label directions moves off-site and eventually ends up in creeks. Many other insecticides migrate in a similar fashion. An effective solution must involve the development of an insecticide formulation that does not migrate from the site of application or one that is toxic only to the target pest.

Direct treatment of runoff to reduce diazinon or other insecticides is impractical for two main reasons. It is difficult to treat a large volume of water in a short period of time as occurs during storm events. Furthermore, diazinon in its dissolved form causes toxicity and it is not readily removed by the usual filtration or settling technologies.

Program's Approach

Lead by Example: Although municipal use accounts for a small fraction of the insecticides used in the county, the member agencies believe they should set an example by ensuring that they minimize risk to the environment and human health. Their first step is to conduct a review of annual insecticide use to determine the quantity used and the targeted insects. The next step is to evaluate the audit results to determine if additional actions could be taken to minimize risk. The results of the audit and evaluation will be submitted to the Regional Board. Member agencies will review existing practices, policies and ordinances to determine where improvements can be made to minimize risk to the environment and human health to the maximum extent practicable. If it is determined that they are not adequate, additional or revised policies or ordinances will be adopted. A summary of the review and recommended revisions will be submitted to the Regional Board.

Outreach to Residents: Advertising Campaigns over the past four years the Program has spent over $500,000 on outreach campaigns aimed at reducing the use of insecticides. For example, the Program participated in the Bay Area Stormwater Management Agencies Association's (BASMAA) regional television advertising campaign "When Ants Invade," which promoted less toxic pest control practices and won a national advertising industry award. The Program has also funded radio, billboard and

newspaper ads. The Program will continue to employ various media to reach residential audiences and encourage the use of a less toxic, integrated pest management (IPM) approach.

Point of Purchase Campaign The Program is participating in the innovative "Our Water, Our World" IPM campaign. Through the campaign the Program encourages stores that sell insecticides to also stock and promote the sale of less-toxic alternatives. Over 20 stores in the county are currently participating. The Program will aggressively market the IPM campaign to other stores with the goal of having at least 40 stores participating within the next two years. Through the distribution of printed material and information on its website, the Program will promote the IPM campaign to residents

Distribution of Informational Material The Program has printed and distributed over 250,000 pesticide-related brochures, fact sheets and informational guides. These materials are distributed by the Program and its member agencies. The Program has been constructing and staffing a stormwater exhibit at the County Fair for the past seven years and has maintained a booth at the Home and Garden show twice a year. Member agencies have been distributing material at their offices and at events such as watershed festivals and Earth Day fairs. The Program will continue these activities and will also distribute material through its website (www.cleanwaterprogram.com).

Outreach to Commercial Facilities: Some commercial facilities hire licensed applicators or self- apply insecticides. Through the Industrial/Commercial Discharge Control Component of the Program, the municipalities will conduct outreach to selected business sectors. The Program will develop or adapt outreach materials that are appropriate for specific business sectors. These materials will be distributed by the municipalities as part of their regular inspection programs. The Program intends to target retail food establishments in Fiscal Year 2001/02.

Partner with Licensed Pest Control Applicators: Licensed pest control applicators apply approximately half of the diazinon used in Alameda County (Scanlin and Cooper, 1997). Any successful effort to minimize the environmental impact associated with insecticide use will need to have the support of the licensed applicators. The Program is committed to working with the licensed applicators to develop an approach that will allow them to maintain their profitability and provide an effective service to their customers in a way that minimizes environmental impacts. The Program will contact licensed applicators in the county, and will work (with those who are willing) to set up a program to minimize water quality impacts from structural pest control applications. The Program will attempt to coordinate this effort with other programs such as the Bio-Integral Resource Center.

Partner with Other Agencies: County Agricultural Commission The Alameda County Agricultural Commission (Commission) has been very involved in the effort to reduce environmental impacts of insecticide use. Representatives of the Commission have attended the Urban Pesticide Committee

and other related meetings. The Program will coordinate with the Commission in the development of outreach efforts, particularly for licensed applicators.

Household Hazardous Waste There are three permanent household hazardous waste (HHW) facilities in Alameda County. The Program has coordinated with the HHW program in the past and will continue to coordinate with the HHW program to promote the proper disposal of insecticides.

Monitoring and Special Studies: The Program has taken a lead in evaluating the sources of diazinon in stormwater in the Bay Area. In fact, one of the Program's studies, Scanlin and Feng (1997), was cited extensively in U.S. EPA's diazinon reregistration (U.S. EPA, 1999). The Program will continue its effort to provide information that will assist in the development of effective control measures.

Develop an Application/Runoff Model The Program is in the process of developing a computer model of the application and runoff of insecticides from an urban area. Certain insecticides or formulations of insecticides may be more likely to be transported by stormwater. The SWMM-based model uses properties such as water solubility, vapor pressure, and environmental persistence to predict stormwater impacts of insecticide use. The Program believes that the model will be useful as a tool to evaluate the impact of alternative control strategies as well as in evaluating the potential impacts of insecticides that will replace diazinon.

Track Trends in Diazinon Concentrations and Stormwater Toxicity The Program will continue to track diazinon concentrations and toxicity in stormwater runoff to assess the effectiveness of its control activities and monitor the effect of the diazinon ban. A detailed sampling plan will be included in the Program's Long Term Monitoring Plan (draft available, August 2001).

Participate in the Regulatory Process: The Program will coordinate with BASMAA, the California Stormwater Quality Task Force, and the Urban Pesticide Committee to provide data, express concerns, and request consideration of its issues in U.S. EPA's and CDPR's insecticide registration decisions.

MERCURY

Problem Definition

Human exposure to mercury has been shown to cause damage to the liver, kidneys, brain and central nervous system; resulting in loss of physical coordination, mental retardation blindness and even death. Developing fetuses and young children are especially susceptible to poisoning.

Table 4-1: Estimated Annual Loadings of Mercury to San Francisco Bay

Source	Estimate of Annual Load (kg/yr)
Central Valley Watershed Sources	607
Within Basin Watershed Sources	168
Atmospheric Deposition	15
Sediment Remobilization	500
Wastewater Discharge	44
Total	1304

(Modified from Abu-Saba and Tang, 2000)

The National Academy of Sciences[1] (NAS) recently completed an independent study of the toxicological effects of methyl mercury to assist the U.S. EPA. Fish consumption is the major source of human exposure to methyl mercury in the U.S. The study found that chronic, low-level prenatal methyl mercury exposure from maternal consumption of fish has been associated with poor performance by offspring on neurobehavioral tests. The study found that these neurodevelopmental deficits are the most sensitive, well-documented effects of low-level, chronic exposure to methyl mercury. While the majority of the U.S. population has a low risk of adverse effects from methyl mercury exposure, individuals who regularly consume fish may have high methyl mercury exposure and demonstrate observable effects. The study also concluded "because of the beneficial effects of fish consumption, the long-term goal needs to be a reduction in the concentrations of MeHg in fish rather than a replacement of fish in the diet by other foods. In the interim, the best method of maintaining fish consumption and minimizing Hg [mercury] exposure is the consumption of fish known to have lower MeHg concentrations."

Analysis of fish tissue samples conducted on fish caught in the San Francisco Bay between 1994 and 1997 showed that concentrations of mercury exceeded established screening levels, suggesting potential health concerns for consumers of Bay fishes (Davis, 1998). Subsequent to the 1994 fish sampling, the California Office of Environmental Health and Hazard Assessment issued an interim Fish Consumption Advisory for all of San Francisco Bay, partly based on mercury concentrations.

Sources and Loadings

Mercury is used in the manufacturing of such items as thermometers, fluorescent lamps, batteries, paints, and other household products. Of particular importance to the Bay Area is the presence of several large natural deposits of mercury within the San Francisco Bay watershed. Much of this mercury was mined during and after the Gold Rush for use in mining operations.

The two largest sources of mercury to Bay waters are inflow from Central Valley watersheds and remobilization of Bay sediment, which account for 46% and 38% of the total load respectively (see Table 4-1). Much of the mercury in

these two sources is a remnant of its historic use in amalgamating gold.

The next largest category of sources of mercury to Bay Waters, is input from local watersheds, which accounts for approximately 13% of the total load. This category encompasses numerous sources, the largest being mercury from the New Almaden mining area in Santa Clara County that accounts for about 30% of the load from local watersheds (that is, 4% of total Bay load). Other sources contributing to the load from local watersheds include air deposition and soil erosion. Local sources contributing to air deposition are not well quantified but significant sources are believed to include crematoria, cement processing plants, stationary and mobile sources of fossil fuel combustion, and broken fluorescent lamps. Some portion of this mercury is deposited on urbanized surfaces in the county and flows to the Bay in stormwater runoff.

Challenges

Reducing levels of mercury in stormwater discharges poses a number of regulatory and technical challenges. Following is a brief description of some of these challenges.

Regulatory Obstacles: Many of the sources contributing mercury to stormwater runoff are beyond the control of local government, for example, some of the mercury is from global sources, and some is from local air sources, such as cement processing plants and crematoria that are regulated by the California Air Resources Board. The California Department of Toxic Substances Control (DTSC) under the Universal Waste Rule regulates the recycling and disposal of fluorescent lamps.

Technical Obstacles: Because mercury bioaccumulates in the food web, minute quantities of mercury in water and sediment can be hazardous. As with other pollutants, removing these minute quantities of mercury from a large volume of water in a short period of time poses a significant challenge. In addition, standard treatment technologies such as detention basins and wetland treatment systems may actually increase the methylation of mercury. This would exacerbate the problem because methyl mercury is the form that bioaccumulates in fish the most rapidly.

Program's Approach

Focus on Fluorescent Lamps:
Fluorescent lamps contain a small amount of mercury with most current generation lamps containing from 10 to 21 mg/bulb. Abu-Saba and Tang (2000) estimate that 13 million fluorescent lamps are disposed of each year in the Bay Area and from this 10-130 kg/year of mercury is released to the environment. Recycling technology is available, and the Regional Board staff has concluded that the recycling of fluorescent lamps is "one of the most effective, readily implementable measures" to reduce the discharge of mercury to the Bay (Abu-Saba and Tang, 2000).

Lead by Example As is the case with the use of insecticides, municipalities use only a tiny fraction of the fluorescent lamps used in the Bay Area. However, the member agencies believe they should set an example for county residents and businesses by ensuring that they minimize the risk to the environment

and human health. The agencies first step will be to conduct a review of their current practices regarding the recycling or disposal of fluorescent lamps. The next step will be to evaluate the results of the survey to determine if these practices could be revised to minimize the risk of mercury release to the environment. The results of the survey and evaluation will be submitted to the Regional Board.

Outreach to Businesses The commercial sector is the largest user of fluorescent lamps. Therefore, the Program will target its initial outreach effort towards businesses. The Program will work with the business community to identify current fluorescent lamp recycling and disposal practices and potential obstacles to increasing the level of recycling. The Program plans to work with the commercial sector and relevant entities such as the Department of Toxic Substances Control (DTSC), the Household Hazardous Waste program, recycling facilities, and the Regional Board to minimize obstacles and provide incentives for recycling. The Program will also develop or adopt outreach material and distribute it to businesses, either through direct mail or in conjunction with the municipalities' Industrial/Commercial inspection program.

Support Changes to Fluorescent Lamp Regulations Current regulations allow businesses to dispose of up to 25 fluorescent lamps at a time as solid waste. The Program will attempt to work with DTSC and other agencies to support and encourage changes to regulations that would promote increased recycling of fluorescent lamps.

Coordinate with Green Business Program The Green Business Program (GBP) helps businesses comply with environmental regulations, and then go beyond compliance to conserve energy, water and other resources, and reduce pollution and waste (www.abag.ca.gov/bayarea/enviro/gbus/gb.html). The Program has been a major supporter of the GBP for several years, and will coordinate with them to promote the recycling of fluorescent lamps at GBP facilities.

Coordinate with Household Hazardous Waste There are three permanent household hazardous waste (HHW) facilities in Alameda County. The Program will coordinate with the HHW program to promote the recycling of fluorescent lamps and other mercury containing products.

Other Mercury Related Efforts:

Participate in the Regulatory Process The Program has been an active participant in the Regional Board's Mercury Council and will continue to support the Regional Board's effort to develop a reasonable approach to solving the mercury problem in the Bay. The Program will also coordinate with BASMAA and the California Stormwater Quality Task Force to develop or support legislation that will help reduce levels of mercury in the Bay.

Track Trends in Mercury Concentrations in Creek Sediment During FY 2000/01 the Program conducted an extensive survey of mercury levels in creek and storm drain sediments throughout the county (Gunther, et al., 2001). During FY 2001/01 the Program will conduct a follow up survey. The Program will

continue its effort to develop information that will assist in the development of effective control measures. The Program is in the process of developing a long-term monitoring plan that will incorporate sediment sampling for mercury. A detailed sampling plan will be included in the Program's Long Term Monitoring Plan (draft available, August 2001).

COPPER

Problem Definition

At very low concentrations, copper is beneficial to aquatic organisms, but at higher concentrations it can be extremely toxic. This toxicity to aquatic life can occur at levels that are not harmful to humans.

The Bay is currently listed as impaired due to copper. However, recent studies have suggested that the Bay should not be listed as impaired, and the Regional Board has indicated that copper may be removed from the list of impairing pollutants on the condition that activities are undertaken to prevent increases in discharges of copper.

Sources and Loadings

Copper is a naturally occurring element that is found in many everyday items, including products associated with building construction, electronic equipment, automobiles, and agriculture. There are a number of significant sources for copper loadings to Bay, but the most significant is automotive vehicle usage. Automobile emissions often contain small amounts of copper. More significantly, brake pads can contain as much as 20% copper by weight. Recent research suggests that brake pad wear may be the largest single contributor of copper to the Bay, adding as much as 40% of the copper in stormwater runoff (Regional Water Quality Control Plant, 1997).

Another potentially significant source of copper to urban runoff is from its use in building construction. The use of copper materials in ornamental applications, gutters, down-spouts, roofs, and algae-resistant treatments for shingles all have the potential for contributing copper to stormwater runoff. Additional significant sources of copper loadings to the Bay include industrial and wastewater discharges; the use of copper in agricultural operations and water treatment systems; and the erosion of native soils, which contain small quantities of copper.

Challenges

Reducing copper levels in stormwater offers challenges similar to reducing diazinon and mercury for both source control and treatment. For example, the largest source of copper to stormwater is believed to be brake-pad wear. As local government agents, Program members are not able to regulate the manufacturing or use of brake pads. Treatment is also problematic since the dissolved form of copper causes toxicity and occasionally exceeds the chronic water quality standard. As with diazinon, dissolved constituents cannot be removed by standard treatment technologies, which rely on filtration or settling of particulates.

Program's Approach

Brake Pad Partnership: The Brake Pad Partnership is a nationwide effort to reduce the level of copper in brake pads. A coalition including stormwater programs, brake pad manufacturers, and the U.S. EPA are working together to find a solution. The partnership was initiated in the Bay Area, and the Program was one of its initial sponsors. The Program continues to support the effort and believes it is the best approach to addressing the problem.

Copper in Building Materials: Barron (2000) estimated that 20% of the copper in runoff from the Palo Alto (CA) area was from the use of copper in building materials. This was partly associated with a large number of luxury homes being constructed in that area at this time. The conditions in Alameda County may be quite different. However, the Program believes that this source of copper is worth looking into, since it could be significant and is one of the few areas where local governments have the potential to initiate a source control effort. The first step the Program will take will be to review construction practices in the county to assess their potential copper contribution. Based on the results of the assessment, municipalities will review and revise their practices if appropriate.

Municipal Maintenance Activities: Street sweeping has the potential to remove some of the copper from brake pad wear and other sources. The municipalities will continue their street sweeping activities in accordance with the municipal maintenance performance standards.

Monitoring and Special Studies: The Program will continue to track the concentration of copper in stormwater runoff in accordance with its Long Term Monitoring Plan (draft available in August 2001), the Program will conduct field studies or literature reviews as necessary to assist with the development and implementation of control measures. The Program also is contributing funding to the North Bay Copper and Nickel Study to investigate the effects of copper on aquatic life.

POLYCHLORINATED BIPHENYLS

Problem Definition

U.S. EPA lists Polychlorinated Biphenyls (PCBs) as a potential carcinogen. Additionally, PCBs are suspected of having negative impacts on the human immune system, reproductive system, nervous system, endocrine system, and digestive system (additional health effects information available at http://www.epa.gov/opptintr/pcb/effects.htm). Although their manufacture is now banned in the United States, PCBs continue to pose a serious risk due to their persistence in the environment.

PCBs accumulate in fatty tissue, hence organisms with a higher fat content will tend to accumulate more PCBs than organisms with a lower fat content. This is important to human health in that several of the more common food fishes in the Bay (e.g., striped bass, white croaker) are marked by relatively high fat content. Sampling conducted on Bay food fishes between 1994 and 1997 showed that concentrations of PCBs in fish tissue exceeded screening values, suggesting potential health concerns for consumers of these fishes (Davis *et al.*, 1998). Subsequent to the 1994 fish

sampling, the California Office of Environmental Health and Hazard Assessment issued an interim fish consumption advisory for all of San Francisco Bay, partly based on PCB concentrations found in Bay fishes.

Sources and Loading

PCBs were used in the past in a number of industrial and commercial applications; most importantly as coolants, lubricants, and insulators in electrical equipment such as transformers and capacitors. Additionally, PCBs at one time found many other uses in products such as paints, sealants, preservatives, and fire retardants.

In the mid-1960s, questions regarding the widespread presence of PCBs and their potential health impacts began to raise concern. Commercial production and import of PCBs into this country was banned by the U.S. EPA in 1979, though some manufacture of "closed system" products (having little potential for escape of PCBs from the system) was allowed to continue. By 1984, virtually all manufacture and distribution of products containing detectable levels of PCBs was banned by the U.S. EPA (Hetzel, 2000).

As with mercury, a large source of PCBs to the Bay water and biota is contaminated Bay sediment. The Regional Monitoring Program's sampling effort has detected areas of contaminated sediment adjacent to heavily industrialized land use. Of particular interest to the Program are elevated concentrations found in the Oakland Estuary, San Leandro Bay, and Emeryville Crescent.

Additional contaminated sediment may still be moving towards the Bay from contaminated sites within local watersheds. An initial survey of creek and storm drain sediment conducted in 2000 found a few sites with elevated concentrations (Gunther, et al., 2001). A follow-up study will be conducted in 2001 to determine if sources can be identified.

Challenges

The immediate obstacle to addressing PCB contamination is that the sources are dispersed and largely unidentified.

Program's Approach

Monitoring and Special Studies: The first step in addressing the discharge of PCBs in stormwater is to develop a better understanding of sources within the county. To do this the Program has initiated a multi-year study of the level of PCBs in creek and storm drain sediments throughout the county. A report on the initial round of sampling has been completed (Gunther et al., 2001). Follow-up sampling upstream of sites where elevated concentrations were found will be conducted during FY 2001-2001.

Participate in the Regulatory Process: The Program has been participating actively in the Regional Board's TMDL stakeholder process and will continue to do so.

Notes

[1] National Research Council. 2000. Toxicological Effects of Methylmercury. Prepublication copy.

SECTION 5 PERFORMANCE STANDARDS

Performance standards that are implemented by member agencies exist for the following five areas of the Plan:

- Public Information and Participation
- Municipal Maintenance Activities
- New Development and Construction Controls
- Illicit Discharge Controls, and
- Industrial and Commercial Discharge Controls

These performance standards define a large part of what each member agency must do to implement the Plan and comply with the NPDES permit. In addition, the Plan's Pollutant Reduction Plans for specific impairing pollutants also describe what the member agencies need to do to implement the Plan. It is expected that agency-led activities in the Pollutant Reduction Plans that prove worthwhile for long-term implementation will eventually be integrated into the performance standards.

CHANGES FROM PREVIOUS PERFORMANCE STANDARDS

The following performance standards are generally the same as during the previous SWMP. Some relatively minor modifications have been made to clarify and improve the performance standards. For example, the performances standards for Municipal Maintenance have been reduced and simplified by eliminating details about Best Management Practices and by retaining the more substantive sections that describe what the performance standards are intended to accomplish. A more substantive change was to move requirements for insect management from these performance standards to the Pollutant Reduction Plans. This change reflects the priority that will be placed on controlling the use of insecticides, the still developing approach for controlling insecticides and the need to involve all of the departments within the member agencies in minimizing insecticide usage.

The improvements in the performance standards reflect the collective experience of everyone who has been implementing the performance standards. Each of the proposed changes was discussed at length by the subcommittee that is directly involved in helping the member agencies to understand and implement the performance standards.

OPPORTUNITY TO PROPOSE ALTERNATIVE PERFORMANCE STANDARDS

As the Program continues to evolve, it is becoming increasingly important to recognize agency and watershed-specific differences. In order to allow appropriate tailoring and improvement of the performance standards, each agency retains the flexibility to propose alternative performance standards for its use that will accomplish equivalent or better water quality improvements than the area-wide performance standards described in the subsequent sections. Alternative agency-specific performance standards must be submitted in writing to the Regional Board's Executive Officer, and the alternative performance standards will not become effective until

approved by the Executive Officer, and that approval will be presumed unless it is rejected in writing within 90 days of submittal.

FLOOD CONTROL DISTRICT RESPONSIBILITIES

Some of the performance standards are appropriate for the Alameda County Flood Control and Water Conservation District (District) and Zone 7 of the District, and others are not. For example, the ACFC&WCD and Zone 7 do not conduct business inspection, nor do they sweep streets. Performance standards that each city, the county, ACFC&WCD and Zone 7 are responsible for implementing use the term "agency(ies)" in the performance standard. Performance standards that each city and the county are responsible for implementing, but not the District and Zone 7 of the District, use the term "municipality(ies)."

PUBLIC INFORMATION AND PARTICIPATION

I. PARTICIPATION IN PI/P SUBCOMMITTEE AND GENERAL PROGRAM ACTIVITIES

1. Each agency will designate a person responsible for implementing its Public Information/Participation (PI/P) activities and for acting as a liaison with the PI/P Subcommittee. This designated person will stay sufficiently informed by attending Subcommittee meetings or using other means to participate constructively in PI/P Subcommittee decisions and activities.

2. Each agency will chair the PI/P Subcommittee on a rotating basis so that the burden of providing leadership for the Program is shared in an equitable manner among all of the agencies.

3. Each agency will complete its PI/P quarter or semiannual deliverable reports within the schedule established by the General Program.

II. INTERNAL AGENCY COMMUNICATION AND TRAINING

City Staff and Officials

Each agency is responsible for identifying, developing, and communicating information about the Program so that its clean water staff, new employees involved with the Program, agency managers, and elected officials are well informed about their role in implementing the Program and the Program's requirements and progress. Each agency will provide information at least annually to these targeted groups.

Procedures and Training for Handling Telephone Calls from the Public about Stormwater

- Each agency will have a procedure that it follows for answering and efficiently routing stormwater related telephone calls to the appropriate municipal staff for handling.

- Agency staff assigned to answering or responding to telephone calls will be trained and familiar with the established procedures.

III. USE OF PROGRAM OUTREACH

As described in Task 5 of the PIP component work plan (Section 3), the General Program will be responsible for conducting surveys to evaluate the effectiveness of public education and outreach efforts implemented by the member agencies and by the General Program.

Distribution of Program Information Pieces

- Each agency will be responsible for identifying, in a written plan maintained at its offices, how it will distribute copies of General Program informational materials.

This plan will be available to the Regional Board upon request.

- Within two years of receiving its allotment from the General Program, each agency will have the goal of completing distribution of these materials to the target audience. Approximately one-half or more of the materials should be distributed within twelve months of receiving the allotment.

- Each agency will be responsible for tracking its inventory of General Program educational materials in order to be able to determine the need to re-order.

Storm Drain Inlet Stencils and Signs

- Each municipality will have stenciled or in some other ways signed ninety percent of its municipality-owned storm drain inlets or conducted activities that are demonstrably equivalent in terms of achieving awareness by residents that materials should not be disposed down storm drains. Demonstrably equivalent means that the municipality will provide examples of comparable alternative activities or have available a valid survey to show that its residents are as aware of where storm drains lead as are residents in comparable communities with stencils or signs. A description of the demonstrably equivalent activities must be submitted in writing and approved in advance by the Regional Board's Executive Officer, and this approval will be presumed unless disapproved in writing within 90 days of its submittal.

- As a goal all stencils and signs installed will be maintained sufficiently to be readable.

- In order to provide an educational opportunity, each municipality will optimize the use of local volunteers to assist with the stenciling or signage activities.

IV. AGENCIES' COMMUNITY OUTREACH PROGRAM

General Needs

The community outreach activity must be reasonably significant in terms of either the level of participation of the member agency and/or the number of people reached by the event.

Agencies will participate in community outreach activities from the areas listed below (under A. through F.) for the purpose of communicating the general stormwater pollution prevention message and complementing the General Program's specific message(s) for its targeted audience(s). Every other year at least one of these activities must be from Category F. The following provides the number of different activities that will be participated in annually:

Over 100,000 in population
- each municipality will participate in eight activities;

Between 50,000 and 100,000
- each municipality will participate in six activities;

Less than 50,000; Alameda County Flood Control and Water Conservation District (District); and Zone 7 of District

- each agency will participate in four activities.

A. Participate in Existing Community Events

Distribute ACCWP information by participating in existing community events (fairs, festivals, exhibits, etc.) held within its or a nearby jurisdiction. This participation may include the setting up of a booth, kiosk display, or other creative means of communicating the general stormwater pollution prevention message, using a specific message to a target group, or make a presentation to a local community service group.

B. Plan/Implement New Community Events

Play a major role in planning and staging a community or citywide event, examples include the following:

- Earth Day or other festival or fair;
- Business mixer;
- Seminar or target group; and/or
- Contests.

C. Contact Media and Conduct Advertising

Maintain local media contacts with local newspaper, radio, and television stations to be able to communicate the general stormwater pollution prevention message, complement the General Program's specific targeted audience(s) and message(s) and complement regional PI/P activities. This local media contact may include: adaptation and/or development and distribution of stormwater related press releases or use of paid advertising including advertising in local telephone directories.

D. Provide Program Information Through Other Venues

The following types of venues may be used:

- Agency newsletter;
- Other municipal newsletter;
- Local magazine;
- Utility bill inserts;
- Mailing to target group; and
- WebPages.

E. Develop and Implement Integrated Outreach Approaches

This area includes activities, such as the following:

- Point of purchase display and giveaway;
- Plan, create and distribute videos;
- Create and stage a play;
- Develop special displays or kiosks for your message especially interactive ones (such as slides in movie theaters);
- Develop/implement program for school curriculum and provide equipment;
- Support and partner with

other agencies to increase or improve pollution prevention capabilities (e.g., helping set up oil and/or antifreeze collection facilities); and
- Make and place signs on sweepers or other vehicles; and
- Place messages on workers' T-shirts.

F. Develop Watershed Awareness

This area includes one or more of the following types of activities that are listed as examples:
- Identify and support a friends of a watershed group and encourage creek cleanups (or if this is infeasible, lagoon or shoreline cleanups) or adopt-a-creek or other volunteer monitoring and resource inventorying activities.
- Conduct a creek cleanup (or if this is not feasible, lagoon or shoreline cleanups) within its jurisdiction on an annual basis; and
- Participate in a local event in its jurisdiction or neighboring jurisdiction as part of the Coastal Commission's annual Coastal Clean-Up Day and/or as part of Earth Day.

Special Needs

Each municipality will identify whether there are any special needs of some of its residents. An example of a special need would be if a significant percentage of the residents are native speakers of a language other than English or Spanish who would be able to better participate in the municipality's stormwater pollution prevention efforts by having materials available in their native language.
If a municipality has identified a special need not being addressed by the General Program, it will, on its own or in collaboration with other member agencies, develop and distribute translated materials or other special materials needed to fill the special need.

V. COORDINATION WITH SCHOOLS

1. If not being performed by others, each municipality will help to distribute to schools within its jurisdiction information provided by the General Program about its school outreach activities, such as, the Bay Savers, Kids in Creeks/Gardens/Marshes/Watersheds workshops, and community stewardship grants.

2. The General Program will continue to develop and produce materials for outreach to schools. Each municipality will make these materials available to schools in its jurisdiction, if not distributed by the General Program or other methods. This may include each municipality disseminating information on how to obtain copies of these materials if this is a more efficient way to achieve distribution.

3. Each municipality will also work with the local school district to encourage that appropriate stormwater pollution prevention and aquatic resource protection information will be taught to

school children within its jurisdiction.

MUNICIPAL MAINTENANCE – GENERAL

The following General Performance Standards apply to all municipal maintenance activities.

I. SPILL RESPONSE

1. If the spill is suspected to be toxic or hazardous materials, maintenance staff will call the public safety dispatcher, 911, and/or the local illicit discharge coordinator.

2. If non-hazardous materials are spilled, maintenance staff will contain the spill area immediately to prevent additional discharge of pollutants into the storm drain system and clean as soon as practicable.

3. Maintenance staff will report spills to, and work with, the agency's illicit discharge coordinator, or appropriate party, to determine the appropriate follow up response (e.g., track the source of the spill and identify product labels that have a bar code identifying the originating agency, contact Building and Planning Departments, send a clean-up bill to the responsible party, etc.).

II. TRAINING

Each agency will train employees and contractors in the use of the Spill Response Performance Standards as appropriate.

III. DISPOSAL OF WASTE MATERIAL AND CHEMICALS

1. Each agency will ensure proper handling and disposal of material removed from streets and storm drainage facilities to prevent discharges of pollutants to surface waters or groundwater.

2. Each agency will dispose of excess chemicals at an Alameda County Household Hazardous Waste Facility or other approved disposal location (or recycle the chemical.)

3. Each agency will properly dispose of or recycle used solvents/chemicals.

IV. CONTRACTORS

1. Each agency shall incorporate the municipal maintenance performance standards into municipal contract specifications.

2. Each agency shall provide volunteers and contractors with educational material describing the Municipal Maintenance Performance Standards as appropriate.

MUNICIPAL MAINTENANCE – STREET CLEANING

I. STREET CLEANING FREQUENCY

1. Each municipality will clean streets on at least a monthly average unless an alternative schedule is approved as described in number 2 below. In calculating this average, the number of curb miles swept in a fiscal year divided by the number of curb miles within a municipality will equal twelve or greater. The removal of cars should be encouraged by having a fixed sweeping schedule. Sweeping will be prioritized to clean the streets that have been found to be typically the dirtiest and to conduct sweeping prior to the rainy season.

2. If a municipality chooses to clean streets less than on a monthly average the rationale for the alternative standard must be describe in a written action plan. The rationale should demonstrate that the alternative schedule is equivalent in terms of protecting water quality as the annual average sweeping. The action plan must be submitted to the Regional Board as part of the Mid Fiscal Year Report or the Annual Report. The alternative standard will not be effective until approved by the Regional Board's Executive Officer, and that approval will be presumed unless it is rejected in writing within 90 days of its submittal.

II. STREET CLEANING OPERATION TO MAXIMIZE POLLUTANT REMOVAL

1. Each municipality will utilize, as appropriate, the Street Cleaning BMPs to maximize pollutant removal during sweeping activities. When purchasing new sweepers, each municipality will review alternative equipment and new technologies to maximize pollutant removal.

III. PROBLEMS ASSOCIATED WITH EFFICIENT STREET CLEANING

Getting Parked Cars Off Streets

1. Each municipality will maintain a consistent sweeping schedule.

2. Each Agency will utilize, as appropriate, the Street Cleaning BMPs to keep curbed areas clear during street cleaning.

Removing Large Accumulations of Leaves Just Prior to Sweeping

Each municipality will have a leaf removal option available to residents. The leaf removal may be conducted by an entity other than the municipality, for example, curbside leaf pick up by a waste management company. Each municipality will utilize, as appropriate, the Street Cleaning BMPs for specific leaf handling methods.

Maintaining Trees Near Streets

Each municipality will provide operators with adequate resources to conveniently report trees interfering with street cleaning.

IV. RECORD KEEPING

1. Each municipality will track miles swept using a broom odometer or by tracking mileage only when cleaning (do not include mileage to an area).

2. Each municipality will track volume or weight of material removed.

MUNICIPAL MAINTENANCE – STORM DRAIN FACILITIES AND WATERCOURSES

I. ROUTINE INSPECTION AND CLEANING

1. Each agency will inspect, and clean as necessary, storm drainage facilities (inlets, culverts, V-ditches, pump stations, open channels, and watercourses), once a year on average unless an alternative schedule is approved as described in number 2 below. The inspections and needed cleaning will preferably occur prior to the rainy season. In calculating this average, some facilities may be inspected more than once per year and others less than once per year.

2. If an agency chooses to inspect, and clean as necessary, storm drainage facilities (inlets, culverts, V-ditches, pump stations, open channels, and watercourses), less than an annual average the rationale for the alternative standard must be described in a written action plan. The rationale should demonstrate that the alternative schedule is equivalent in terms of protecting water quality as the annual average inspection. The action plan must be submitted to the Regional Board as part of the Mid Fiscal Year Report or the Annual Report. The alternative standard will not be effective until approved by the Regional Board's Executive Officer, and that approval will be presumed unless it is rejected in writing within 90 days of its submittal.

3. When cleaning storm drainage facilities, each agency will remove the maximum amount of material at the nearest access point to minimize discharges to watercourses.

4. Each agency will maintain a storm drainage facility inspection and maintenance plan. The Plan includes:

   a. Schedule for inspecting storm drainage facilities;

   b. Rational for determining when to clean inlets, etc.;

   c. Results of an evaluation to install additional screens or grates near or in inlets to inhibit discharge of litter, but where flooding is not a concern;

   d. Identification of target areas that tend to accumulate excessive pollutants for cleaning and/or public education; and

   e. Inventory of the storm drain system.

5. Unless provided for in an alternative plan approved by the Regional Board's Executive Officer, each agency will inspect twice a year storm drainage facilities that tend to accumulate excessive sediment and debris: prior to the rainy season to prevent flooding and discharge of pollutants and after the rainy season to remove sediment and debris.

6. Each agency will inspect storm drain inlets monthly during the wet season

in areas suspected of containing illegal dumping, and clean as necessary.

II. RECORD KEEPING

1. Each agency will report the amount of material removed when cleaning storm drainage facilities in monthly record keeping forms.

2. Each agency will document and track spill incidents and response to spill incidents either as described in the "Monthly Record Keeping Form" or as part of the Illicit Discharge Quarterly Summary Form.

3. Each agency will document and maintain the following records monthly for pump stations and watercourses:

    a. Areas/sites inspected,
    b. Silt and vegetation removal practices,
    c. Areas where man-made materials are removed, type and estimate of quantity or weight removed,
    d. Disposal practices and any testing results,
    e. Spill incidents and follow-up actions,
    f. Application of chemicals (type used, areas applied), and
    g. Areas for possible improvements.

III. INSPECTION AND MAINTENANCE

1. Each agency will inspect pump stations after the wet season and develop a schedule for maintenance activities prior to the next wet season.

2. Each agency will inspect trash racks and oil absorbent booms during or after significant storms. Remove debris in trash racks and replace oil absorbent booms as needed.

IV. PERMITS AND OTHER REGULATORY REQUIREMENTS

Each agency will coordinate with the California Department of Fish and Game, the U.S. Army Corps of Engineers, and other agencies as appropriate in order to comply with regulatory requirements prior to commencing work.

V. VEGETATION

See procedures in the Municipal Maintenance BMP Manual.

MUNICIPAL MAINTENANCE – CORPORATION YARDS AND AUXILIARY STORAGE AREAS

I. GENERAL BMPS

1. Each agency will ensure that necessary safety equipment and spill containment kits are readily accessible in areas where chemicals are used, in fueling areas, and in areas that have a potential for spills. Each agency will inspect safety equipment (eye flushing stations, etc.) regularly to ensure they are operational.

2. Each agency will assign one person the primary responsibility for ensuring that BMPs are implemented. This person will also be responsible for ensuring that all persons using the facility are aware of BMPs.

3. Each agency will stencil inlets to the storm drainage system with a message such as "No Dumping, Drains to Bay".

4. Each agency will conduct facility surveys annually - possibly in conjunction with hazardous materials management and/or spill prevention inspections.

5. Each agency will have a Storm Water Pollution Prevention Plan (SWPPP) for each corporation yard.

6. Each agency will inspect the yard routinely to ensure that there are no illegal discharges to the storm drain system and that during storms, pollutant discharges are controlled to the maximum extent practicable.

7. Each agency will sweep the corporation yard. The agency will dispose of material removed from streets and storm drainage facilities often to eliminate exposure to rainwater and runoff to the storm drain system.

II. WASHING VEHICLES/EQUIPMENT

1. Each agency will clean all vehicles/equipment on designated wash pad areas or off-site if needed so washwater drains to the sanitary sewer or is recycled.

2. Each agency will ensure that wash pad area and sump are large enough so that all washwater drains to the sanitary sewer or recycling system. The agency will re-grade area if necessary or install dikes to convey washwater.

III. REFUSE HOLDING AREAS

Each agency will store material removed from storm drainage facilities and streets on a concrete or asphalt pad in a contained area. The agency will drain liquids to the sanitary sewer or allow it to evaporate. If feasible, the agency will cover the storage area during the rainy season.

IV. FUEL DISPENSING AREAS

1. Each agency will store spill

containment kits nearby. If spills occur, the agency will use dry methods to clean the fueling area and follow procedures in the Hazardous Materials Business Plan (HMBP) and/or Spill Prevention Control and Countermeasure Plan.

2. Each agency will maintain signs reminding people not to "top off" tanks.

3. Appropriate spill equipment will be used when mobile fueling is implemented.

4. Each agency will cover fuel dispensing areas, when feasible. The agency will not conduct fueling over open ground (ground should be covered by concrete or asphalt protected with a sealant).

V. CHEMICAL USAGE AND STORAGE

1. Each agency will store paint and other chemicals in an approved covered containment area. If 55-gallon drums containing hazardous materials or wastes are stored outside, each agency will keep drums in an approved containment area.

2. Each agency will minimize use of chemicals. The agency will use water-based paints and non-toxic chemicals as much as possible.

VI. FLEET MAINTENANCE/VEHICLE PARKING AREAS

1. Each agency will minimize leaks from vehicles by performing routine inspections, repairing vehicles with significant leaks, and employing drips pans where appropriate.

2. Each agency will periodically dry sweep the area.

MUNICIPAL MAINTENANCE – LITTER CONTROL, ROAD REPAIR AND GRAFFITI REMOVAL

LITTER

1. Each agency will provide an adequate number of litter receptacles in commercial areas and other litter source areas. Agencies will make every effort to contain litter in receptacles.

2. Each agency will ensure litter receptacles are maintained on a frequent enough basis to minimize or prevent spillage.

3. Each agency will document and maintain the following records monthly:

    a. Areas targeted for litter removal

    b. Total amount of material removed

ROAD REPAIR

I. General

1. Each agency will schedule excavation and road maintenance activities for dry weather, if feasible.

2. Each agency will perform major equipment repairs at the corporation yard, when practical.

3. When refueling or maintaining vehicles and equipment on-site, each agency will use a location away from storm drain inlets and creeks.

4. Each agency will recycle used motor oil, diesel oil, concrete, broken asphalt, etc. whenever possible.

5. Each agency will contain diesel oil used to lubricate or clean equipment or parts.

II. ASPHALT/CONCRETE REMOVAL

Each agency will utilize, as appropriate, the Road Repair BMPs for protecting storm drain inlets prior to breaking up asphalt or concrete. The agencies will clean afterwards by sweeping up as much material as possible.

III. PATCHING AND RESURFACING

1. Each agency will utilize, as appropriate, the Road Repair BMPs for protecting storm drain inlets prior to patching and resurfacing activities.

2. Agencies will not stockpile materials in streets, gutter areas or near storm drain inlets or creeks unless these areas are protected.

3. Agencies will never wash excess material from exposed aggregate concrete or similar treatments into a street or storm drain inlet. Each agency will designate an unpaved area for clean up and proper disposal of excess materials.

IV. EQUIPMENT CLEAN UP/STORAGE

Each Agency will clean equipment at the end of the day at the corporation yard, when possible, and will cover sprayers and patching and paving equipment to prevent rainfall from contacting pollutants.

GRAFFITI REMOVAL

See graffiti removal BMPs in the Municipal Maintenance BMP Manual.

NEW DEVELOPMENT AND CONSTRUCTION SITE CONTROLS

The following performance standards apply to all Clean Water Program member agencies for all construction activity including clearing, grading and excavation activities that result in the cumulative disturbance of 10,000 or greater square feet of land that would discharge stormwater to the municipally-owned storm drain system. A member agency may consider a project exempt from these performance standards if it would disturb less than 10,000 square feet of land and it does not cause substantial or potentially substantial adverse change in the quantity and/or quality of stormwater runoff generated from the site considering all four of the following conditions:

- The size of the project is negligible;
- The amount of land disturbed is insignificant;
- The potential impact on stormwater quality and quantity is insignificant; and
- The intensity of the construction activity is minimal.

I. MEASURES AND POLICIES TO CONTROL THE QUALITY OF STORMWATER RUNOFF

1. Each agency will incorporate the New Development Subcommittee's conditions of approval into its standards for development, as appropriate.

2. Each agency will document permanent erosion and stormwater quality controls, controls during construction, and operation and maintenance of structural controls in conditions of approval for both public and private projects. Best management practices (BMPs) will be selected from appropriate guidance materials.

3. Each agency will ensure that stormwater quality requirements are included in plans and contract specifications for municipal construction projects.

4. Each agency will implement design guidelines and practices that incorporate water quality protection measures for both public and private projects.

The Following Will Be Implemented when General Plans and Ordinances are Amended:

1. Each agency will review and update General Plan policies and implementation measures that help preserve and enhance water quality.

2. Each agency will review and update legal authority provided in erosion control and stormwater management and discharge control ordinances.

II. EDUCATIONAL ACTIVITIES

1. Each agency will provide educational materials (BMP flyers, Blueprint for a Clean Bay, etc.) to municipal staff, developers, contractors, construction site operators, and owner/builders, as appropriate. (Requires coordination with the PIP Subcommittee.)
2. Each agency will educate:

- Staff responsible for development application and plan review on stormwater quality issues and controls. Agencies will provide information on municipal design guidelines, ordinances, conditions of approval, contract specifications and protected sensitive areas.

- Construction site inspectors on proper implementation and maintenance of erosion and sediment controls and materials/waste management BMPs.

- Other municipal staff involved in development and redevelopment projects (e.g., capital improvement, public works, and/or building inspectors).

3. Each agency will provide pre-application materials containing information on stormwater controls and requirements to developers.

4. Each agency will attach appropriate BMP information to building permits, as needed.

III. DEVELOPMENT APPLICATION AND PLAN REVIEW

1. Each agency will continue to evaluate the effects of development on stormwater runoff and wetlands in the CEQA process.

2. Each agency will consider water quality impacts in the context of their review and possible approval of both public and private development projects.

3. Agencies will require public and private development projects to include site planning and design techniques to prevent and minimize impacts to water quality. These may include the following:

   a. Minimize land disturbance.

   b. Minimize impervious surfaces, especially directly connected impervious areas.

   c. Use of clustering.

   d. Preservation of quality open space.

   e. Maintain (and/or restore, if possible) riparian areas and wetlands as project amenities, establishing vegetation buffer zones to reduce runoff into waterways.

4. Each agency will require public and private development projects to include permanent stormwater quality controls, as appropriate, if sufficient site planning measures are not implemented or feasible.

IV. EROSION AND SEDIMENTATION CONTROL

1. Each agency will review its erosion control program for adequacy, and identify and implement any improvements needed in the following areas:

   a. Enforcement authority (grading, erosion, and/or

stormwater control ordinances).

b. Minimum BMPs required.

c. Training and tools for inspectors.

d. Information for developers and contractors.

2. As a condition of issuance of a grading permit, each agency will require developers to prepare, submit to the agency for review and approval, and implement an effective erosion and sediment control plan or similar administrative document that contains erosion and sediment control provisions.

3. Each agency will require developers to provide permanent erosion and stormwater controls on plans submitted for projects.

V. STATE GENERAL PERMIT

Prior to construction of a project that disturbs ≥ 5 acres, each agency will require a copy of the Notice of Intent (NOI) sent to the State Water Resources Control Board for coverage under the Construction Activity Stormwater NPDES General Permit.

The Following Will Be Implemented upon Adoption of the New Construction General Permit:[1]

1. Prior to construction of a project that disturbs ≥ 1 acres, each agency will require a copy of the Notice of Intent (NOI) sent to the State Water Resources Control Board for coverage under a Construction Activity Stormwater NPDES General Permit.

2. Prior to the construction of a project that requires the filing of an NOI, each agency will require a copy of the project's Stormwater Pollution Prevention Plan (SWPPP).

VI. CONSTRUCTION SITE FIELD CONTROLS

1. Each agency will require that project applicants prepare and submit a Stormwater Quality Protection Plan[2] prior to the start of construction activity, to demonstrate that the owner, developer, and/or contractor has evaluated BMPs and provided those appropriate for protection of stormwater quality during construction activities.

2. Each agency will coordinate construction inspections and enforcement of corrective actions with Regional Board staff, if appropriate.

3. Each agency will inspect construction sites for adequacy of stormwater quality control measures on a regular basis, with the frequency of inspections based on considerations such as the size of the project, its potential impact on stormwater quality, and the amount of construction activity.

4. For construction sites requiring erosion sediment control plans, each agency will inspect sites prior to the beginning of the wet season

each year, to ensure that measures have been taken to prevent erosion and minimize discharges of sediment from disturbed areas.

5. For construction sites requiring erosion sediment control plans, each agency will inspect sites following each major storm event or series of events during the wet season of each year, to observe the effectiveness of erosion sediment control measures.

6. For project site inspections, inspectors will:
   a. If available, review the Stormwater Quality Protection Plan prior to conducting the inspection.

   b. Inspect for and effectively prohibit non-stormwater discharges, except those discharges which contain no pollutants.

   c. Whenever possible, visually observe the quality of stormwater runoff after a major storm event.
   d. Require proper implementation and maintenance of erosion sediment controls and material/waste management BMPs (e.g., covering stockpiled materials, designating work and storage areas) to minimize the discharge of pollutants.

   e. If appropriate, document stormwater violations and corrective actions.

VII. WATERSHED RESOURCE INVENTORY AND PLANNING

These activities will be coordinated with the Watershed Assessment and Monitoring (WAM) Subcommittee.

1. Each agency will develop and submit with the *Annual Report*[3] an approach and schedule for conducting a watershed management issues assessment based on guidance from the Regional Board and guidance being developed by the WAM Subcommittee as it becomes available.

The Following Will Be Implemented when General Plans and Ordinances are Amended:

1. Each agency will consider the criteria for sensitive areas as guidance when amending their General Plans.

2. Each agency will incorporate findings from the watershed resource inventories conducted by the WAM Subcommittee into General Plan amendments.

VIII. POLICIES FOR MAINTAINANCE AND OPERATIONS OF FLOOD CONTROL CHANNELS AND WATER COURSES) –

These performance standards apply to all agencies that maintain creeks and flood control channels.

Each agency will consider potential benefits to habitat,

education, recreation, and water quality when planning flood control channel maintenance and improvements.

IX. SUBCOMMITTEE MEETINGS AND WORKSHOPS

1. At least one representative from each agency will attend the Program's New Development workshops.

2. Each agency will chair the New Development Subcommittee on a rotating basis so that the burden of providing leadership is shared equitably.

3. Each agency will designate a person responsible for implementing the New Development, Redevelopment, and Construction Site Controls Component and for acting as a liaison with the New Development Subcommittee. This designated person will stay informed sufficiently to participate in New Development Subcommittee decisions and activities.

ILLICIT DISCHARGE CONTROLS

I. ILLICIT DISCHARGE CONTROL INSPECTION PROGRAM –

These performance standards apply to all agencies.

1. Each agency will prepare a written Five-Year Action Plan that demonstrates the agency's commitment to conducting effective investigation, tracking, and elimination of illicit discharges and describes the level of effort for conducting these activities. The Action Plan will demonstrate that the agency has:

    a. Identified, verified, and prioritized problem areas for investigation and/or repeat inspections.

    b. Defined priority for investigation of all areas within their jurisdiction.

    c. Demonstrated commitment to survey high priority areas annually.

    d. Defined frequency of survey for second and/or third priority areas, until the entire agency's drainage area has been inspected at least once during the five-year period of the Action Plan.

    e. Selected which agency or group will conduct the field surveys and estimated the number of labor hours required to implement the program. When more than one department is involved with conducting field surveys, determined how illicit discharge surveys and follow-up activities will be coordinated.

    f. Established how activities will be documented.

    g. Adopted the minimum enforcement procedures.

    h. Developed procedures for enforcement or referral to an outside agency, including appropriate time periods for action.

    The Five-Year Action Plan will be submitted to the Regional Board by May 30, 2003.

2. Each agency will review annually and update as necessary its Five-Year Action Plan. The review will include an evaluation of field survey results from the previous year and an assessment of which types of non-stormwater discharges were most prevalent. Changes for the coming fiscal year will be submitted to the Regional Board by March 1.

3. Each agency will ensure that designated illicit discharge inspectors are trained. Agencies

will provide inspectors with the knowledge and skills necessary to conduct effective field investigations, with guidance from the Industrial & Illicit Discharge Control (I&IDC) Subcommittee and Regional Board staff.

4. Each agency will develop or obtain accurate maps of the agency's storm drain system including major drain segments, reaches, and outfalls within the agency's jurisdiction.

II. CONDUCTING FIELD INVESTIGATIONS

These performance standards apply to all agencies.

1. Each agency will conduct field investigations that include inspecting portions of the municipal storm drain system for potential sources of illicit discharges. Inspectors will:

    a. Survey priority areas as defined in the Five-Year Action Plan and make observations. Record observed or suspected dry weather flows.

    b. As possible, attempt to determine the type of flow and try to trace the flow to its source by following storm drain maps, inspecting manholes, and making surface observations. Record findings.

    c. If the responsible party is identified, educate the party on the impacts of his or her actions, explain the stormwater requirements, and provide BMPs. Initiate follow-up and/or enforcement procedures, if applicable. (Follow-up and enforcement activities are detailed further in Section III below.) Record activities.

2. Each agency will send at least one representative to General Program workshops to obtain additional training and share experiences with other agencies. The I&IDC Subcommittee will annually assess inspector training needs.

III. EVALUATING COMPLIANCE OF NON-STORMWATER DISCHARGER

These performance standards apply to all agencies.

Follow-up Activities

1. Each agency will continue inspection and follow-up activities until compliance is achieved. Record activities.

2. Agency staff will meet with the responsible party to discuss methods for eliminating the illicit discharge, including disposal options, recycling and possible discharge to the sanitary sewer, as appropriate. Provide ACCWP information to the responsible party. In the case of washwaters, refer to the incremental BMPs in *Recommended Discharge Elimination/Disposal Priorities for Washwaters* (September, 1994).

3. If the discharge is traced to a business, inspectors will coordinate information on the illicit discharge with the industrial/commercial discharge control program.

4. The appropriate agency will begin enforcement procedures, if necessary.

Enforcement

1. Agencies will conduct enforcement activities and report these activities as outlined in the *Protocol for Reporting Enforcement Activities* (*Protocols*). These activities are set forth by the individual municipality ordinances.

2. Agencies will provide inspectors with sufficient authority to initiate enforcement procedures.

IV. SPILL REPORTS/COMPLAINTS

These performance standards apply to all agencies.

Since a network of spill response and clean up programs already exists, establishing a new and separate stormwater response program would duplicate many of the services already being provided by these programs. The approach of the ACCWP illicit discharge control component is to supplement these services and respond to spill incidents that are not under the purview of previously existing clean-up programs. Within this context, each agency will implement the following performance standards.

1. Inspectors will investigate spill reports and/or complaints within their jurisdiction and record their activities.

2. Inspectors will become familiar with the existing spill response and clean-up programs that cover the agency's jurisdiction, and coordinate illicit discharge program activities with these existing programs.

3. Through internal communication and public education, agencies will encourage the use of "911" to report large or hazardous spills. If the use of "911" is not appropriate in a particular agency, establish and publicize an alternative telephone number for reporting spills.

4. Each agency will establish a mechanism for obtaining information about spill incidents so that source identification and follow-up actions can be conducted.

5. Each agency will identify an appropriate role for its participation in spill response drills, in cooperation with other agencies or industries.

V. DOCUMENTATION AND REPORTING

These performance standards apply to all agencies.

1. Each agency will summarize field investigations and follow-up activities using the Illicit Discharge Inspection Quarterly Summary Report form. These forms will be incorporated into the ACCWP's annual reports to the Regional Board.

2. Each agency will document the number and types of spill incidents reported and responded to within the agency's jurisdiction, based on direct calls, "911" dispatch records, referrals from the General Program, and other sources. (Agencies do not need to document automotive fluid spills for traffic accidents.) This information will be incorporated into the ACCWP's annual reports to the Regional Board.

3. Location of field investigations and incidents responded to must be tracked and recorded internally and be available for Regional Board staff review. This data does not need to be included in the ACCWP's annual reports to the Regional Board.

4. Each agency will describe training and coordination of staff involved with illicit discharges. This information will be incorporated into the ACCWP's annual reports to the Regional Board.

INDUSTRIAL AND COMMERCIAL DISCHARGE CONTROLS

I. INDUSTRIAL AND COMMERCIAL BUSINESS INSPECTION PROGRAM

These performance standards apply to all municipalities.

1. Each municipality will prepare a written five-year Inspection Plan that describes industrial and commercial sectors, as well as business inspection procedures and priorities. The five-year Inspection Plan will be submitted to the Regional Board by May 30, 2003.

2. Each municipality will prepare annually a written Inspection Workplan that outlines specific steps the municipality will take to conduct effective inspections in the following year. The Inspection Workplan will include:

    a. An evaluation of inspection results from the previous year to assess which industry types had the most impact on stormwater quality.

    b. An estimate of the number of facilities to be inspected in the coming fiscal year listed by type of business. If a business is being inspected due to geographical location, then it will be listed by geographical sector.

    c. An estimate of the number of high priority facilities that will be inspected in the coming fiscal year. The goal is to inspect the business community that has the potential to impact stormwater quality, at least once during the five-year permit period.

    d. As appropriate, a summary of efforts to coordinate inter/intra-agency issues.

    The Inspection Workplan for the coming fiscal year will be submitted to the Regional Board by March 1 of each year, except the FY 2003/4 workplan which will be submitted by May 30, 2003.

3. Each municipality will ensure facility inspectors are adequately trained. This includes the knowledge and skills necessary to conduct effective stormwater inspections, with direction from the Industrial & Illicit Discharge Control (I&IDC) Subcommittee. This may include: stormwater regulations and requirements (including the municipality's ordinance, municipal stormwater permit, and the industrial stormwater general permit); the impacts of non-stormwater discharges to the storm drains; inspection techniques and procedures; follow-up and enforcement procedures; and stormwater BMPs.

4. Each municipality will conduct outreach in addition to inspection activities, to inform facility representatives about appropriate stormwater BMP information. This may be satisfied by responding to telephone calls from business representatives, making presentations to business groups, or participating in focused outreach efforts coordinated by the I&IDC Subcommittee for targeted business groups.

5. Municipalities may coordinate outreach information with other ACCWP Subcommittees and other inspection programs.

II. INSPECTION ACTIVITIES

These performance standards apply to all agencies.

1. Each agency will respond to complaints or referrals concerning a facility. The response may include actions such as: interviewing the caller concerning the specific nature of the discharge; inspecting the site; locating any non-stormwater discharges to the storm drains; informing the facility representative of appropriate stormwater BMPs; and conducting follow-up measures to ensure compliance is achieved.

2. Each municipality will update their list of businesses from the following as appropriate: inter/intra-agency referrals; other agency and department lists; business licenses; water/utility bills; etc.

Preparing for the Site Visit

Inspectors will review existing information on the site and its regulatory history.

During the Site Visit

1. Inspectors will review the facility layout to locate the storm drain system and/or stormwater drainage path for storage areas, process areas, vehicle and heavy equipment wash and maintenance areas, and stormwater sampling locations, if applicable.

2. Inspectors will review/inspect the following areas for the potential to discharge pollutants from non-stormwater discharges or exposure to runoff. The areas that are inspected will depend on facility operations.

    a. Outdoor process/manufacturing areas;

    b. Outdoor material storage areas;

    c. Outdoor waste storage and disposal areas;

    d. Outdoor vehicle and heavy equipment storage and maintenance areas;

    e. Outdoor parking areas and

access roads;

f. Equipment on rooftops;

g. Outdoor wash areas;

h. Outdoor drainage from indoor areas; and

i. Stormwater conveyance system maintenance, and emergency response practices.

3. Inspectors will collect the information on the most recently adopted Standard Stormwater Facility Inspection Report Form.

4. Inspectors will use the facility's SWPPP, if available, as a tool in assessing the facility's stormwater pollution control activities. This will not imply review or approval of the adequacy of the SWPPP.

5. Inspectors will identify and inform the facility representative about problems and violation(s), if applicable. A schedule for correcting problems identified during the inspection and a means for verifying its implementation will be coordinated between the inspector and the facility representative. This information will also be noted on the inspection form.

6. Inspectors will provide facility representatives with appropriate BMP information, education materials, and inter/intra-agency referrals as appropriate.

7. Inspectors will obtain ongoing training to support inspection activities and to continue to improve program implementation. Inspector(s) representing each municipality will attend General Program inspector training workshops. The Industrial & Illicit Discharge Control Subcommittee will annually assess inspector training needs.

III. FACILITY COMPLIANCE EVALUATION

These performance standards apply to all agencies.

Repeat/Follow-up Inspection

1. The inspector will determine if the facility is in compliance with the municipality's stormwater ordinance (i.e., there are no unpermitted non-stormwater discharges and pollutant exposure to rain is minimized).

2. Inspectors will prioritize the facility for re-inspection. If a problem was identified during the inspection, inspectors will perform a follow-up inspection or initiate a self-certification process where the facility representative certifies in writing that the problem has been removed or corrected within the time specified by the inspector.

3. Inspectors will begin enforcement procedures as appropriate.

Enforcement

4. Agencies will conduct enforcement activities and report these activities as outlined in the *Protocol for Reporting Enforcement Activities*

adopted by the Industrial & Illicit Discharge Control Subcommittee and the Management Committee. These activities are set forth by the individual agency ordinances.

IV. DOCUMENTATION AND REPORTING

These performance standards apply to all agencies.

Each municipality will annually review inspection results and assess whether goals were met. The General Program will summarize inspection activity, follow-up activities, and enforcement action taken against businesses determined to be in non-compliance. This review will be incorporated into the Program's *Annual Report* to the Regional Board.

Notes

[1] Implement when State Board adopts a Construction Activity Stormwater NPDES General Permit for construction activities ≥ 1 acres.
[2] For projects that require a NOI, the SWPPP is equivalent to a Stormwater Quality Protection Plan.
[3] Approach and schedule to be submitted with the second *Annual Report* after permit adoption.

REFERENCES

SECTION 2

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SECTION 5

Approach and schedule to be submitted with the second *Annual Report* after permit adoption.

Implement when State Board adopts a Construction Activity Stormwater NPDES General Permit for construction activities ≥ 1 acres.

For projects that require a NOI, the SWPPP is equivalent to a Stormwater Quality Protection Plan.

Appendix A: Memorandum of Agreement

AGREEMENT

TO IMPLEMENT THE ALAMEDA COUNTY

URBAN RUNOFF CLEAN WATER PROGRAM

(Including First and Second Amendments)

AGREEMENT

PROVIDING FOR IMPLEMENTATION OF THE
ALAMEDA COUNTY URBAN RUNOFF CLEAN WATER PROGRAM

THIS AGREEMENT is made and entered into this day of , 1991 by and between the following undersigned public agencies, all which are referred to collectively as the Parties.

ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, a public agency of the State of California;

Zone 7 of ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, a local public agency of the State of California;

COUNTY OF ALAMEDA, a subdivision of the State of California;

CITY OF ALAMEDA, a municipal corporation of the State of California;

CITY OF ALBANY, a municipal corporation of the State of California;

CITY OF BERKELEY, a municipal corporation of the State of California;

CITY OF DUBLIN, a municipal corporation of the State of California;

CITY OF EMERYVILLE, a municipal corporation of the State of California;

CITY OF FREMONT, a municipal corporation of the State of California;

CITY OF HAYWARD, a municipal corporation of the State of California;

CITY OF LIVERMORE, a municipal corporation of the State of California;

CITY OF NEWARK, a municipal corporation of the State of California;

CITY OF OAKLAND, a municipal corporation of the State of California;

CITY OF PIEDMONT, a municipal corporation of the State of California;

CITY OF PLEASANTON, a municipal corporation of the State of California;

CITY OF SAN LEANDRO, a municipal corporation of the State of California; and CITY OF UNION CITY, a municipal corporation of the State of California.

RECITALS

A. The 1986 Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan), adopted by the Regional Water Quality Control Board in implementation of the Federal Clean Water Act, requires that the PARTIES develop a Program to control the discharge of pollutants from urban runoff.

B. In furtherance of their responsibilities pursuant to the Basin Plan, the PARTIES, have previously entered into a series of agreements to jointly fund the cost of preparing an action plan to evaluate nonpoint source pollutants, monitor identified pollutants and develop control measures to mitigate or reduce nonpoint sources of pollutants. Collectively, the measures undertaken pursuant to the previous agreements and anticipated to continue pursuant to this Agreement, are known as the Alameda County Urban Runoff Clean Water Program (hereinafter "Program"). The Program contains certain elements which provide a general benefit to the parties (such as monitoring, public education, program administration, etc.) and these elements of joint responsibility among the parties are termed the "General Program". In addition, the Program contains other elements which are an individual Party responsibility and which provide individual benefits (such as construction site controls, catch basin cleaning, and illicit and illegal connection

inspections, monitoring and enforcement), and these elements are termed the "Individual Programs". A description of the General and Individual Programs' elements, major tasks, schedules, and budgets will be developed as part of the "Work Plan for Cities in Alameda County, Alameda County, and the Alameda County Flood Control and Water Conservation District to file for a NPDES Permit" dated August 24, 1990.

C. The previous Agreements that have been executed are the following: The November 10, 1987 "Agreement Regarding Evaluation of the Non-Point Source of Water Pollution" and the October 17, 1989 "Agreement Regarding Implementation of Nonpoint Source Control Evaluation Program". In addition there is a pending agreement titled "Agreement Regarding Development of a Proposed Alameda County Nonpoint Source Control Management Plan" which will provide funding through June 1991 for implementation of the August 24, 1990 work plan.

D. The PARTIES desire to continue the Program and to enter into this Agreement for the purpose of ensuring continued participation, in terms of cost and administrative responsibilities.

E. This Agreement does not amend or supersede any prior agreement among the PARTIES regarding the Program, but is to be read as in accord with and

implementation thereof.

F. The Alameda County Flood Control and Water Conservation District (District) is a local public agency of the State of California duly organized and existing and empowered to conserve water and to provide maintenance and flood control management of the water courses and has the authority to control the discharge of surface waters to its facilities. The County of Alameda and all of the cities therein are subdivisions of the State with authority to control the discharge of surface waters from their respective jurisdictions.

NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS:

1. A Management Committee is hereby created to provide overall program direction, review and recommend an annual budget for approval by the PARTIES, and budget oversight, all in accordance with the Alameda County Urban Runoff Clean Water Program. Management Committee members, and their alternates, shall be appointed by the City Manager or the equivalent of the respective Parties and a confirming letter sent to the authorized representative of the District. The Management Committee shall adopt bylaws for its governance.

(a) Each Party to this agreement is allocated the number (or fraction thereof) of votes shown in Exhibit A. This allocation of voting strength is based on the formulas stated in Exhibit B to the Agreement.

(b) A quorum for the conduct of business by the Management Committee shall be a majority of the voting Parties to the Agreement. The voting strength allocated to a Party shall not be considered in the determination of a quorum.

(c) Approval of actions by the Management Committee shall require a two-thirds affirmative vote of all allocated votes as shown in Exhibit A.

No action shall be taken by the District which requires expenditures by any party other than the District without prior Management Committee approval.

2. Pursuant to direction of the Management Committee, the District shall administer and coordinate the Program, which duties include but are not limited to:

(a) Reapplying on behalf of the PARTIES to become co-applicants for a National Pollutant Discharge Elimination System (NPDES) permit;

(b) Preparing draft annual budget and, periodic status reports on Program activities and expenditure and distributing same to PARTIES at least annually;

(c) Consolidating and submitting reports prepared by the several PARTIES required by the NPDES permit;

(d) Letting and administering approved consultant contracts according to District policies and procedures and considering other members' requirements. All consultant contracts will contain hold harmless and indemnity provisions and insurance requirements for the benefit of all PARTIES;

(e) Conducting audits of consultant contracts in accordance with District policies and procedures;

(f) Maintaining knowledge of and advising the PARTIES regarding current and proposed state and federal policies, regulations and programs that impact nonpoint source pollutant control programs; assisting the PARTIES in development and presentation of positions on these issues before local, State, and Federal agencies;

(g) Preparing an annual report on the implementation of the Program;

(h) Representing the PARTIES in participation in the Bay Area Stormwater Management Agencies Association; and

(i) Formally advising the appropriate State and Federal agencies of termination or amendment of this Agreement.

3. The PARTIES accept and agree to perform the following duties:

(a) Each will authorize a representative to reapply for an NPDES permit as co-applicants with the other Parties;

(b) Each will fully comply with the NPDES permit conditions applicable to its Individual Program and its identified portion of the General Program;

(c) Each will select a representative and an alternate to participate in Management Committee meetings and other required meetings of the PARTIES;

(d) Each will fund and implement its own Individual Program, and will fund and implement its share of the General Program. The District intends to provide funding to support new and expanded activities required by the General and Individual Programs for Cities locate in District zones with Benefit Assessment Programs. Such funding will be provided to the extent that it is available and with the concurrence of the applicable City if it results in deferring flood control projects.

(e) Each will provide agreed upon reports (certified under penalty of perjury) to the District on compliance with applicable provisions of the NPDES permit and program implementation.

4. A proper accounting of funds and reports of all receipts and disbursements shall be made, including funds disbursed to individual parties for implementation of permit programs. Upon completion of the purposes of this Agreement, any surplus money on hand shall be returned in proportion to the

contributions made. In the event a Party terminates this Agreement, any unexpended portion of its share of cost funds shall be returned to it.

5. By agreement of the PARTIES, budget allocations and voting shares for the General Program shall be made according to a formula which for the municipalities allocates proportional shares based on a 50 percent weight given to the area and a 50 percent weight given to the population within each municipalities' jurisdiction (excluding open water and wetland areas of San Francisco Bay). The attached Exhibit B provides a copy of the formulas which are used to allocate costs. Each Parties' share of the General Program's costs for fiscal year 1991/92 will be according to the percentages provided in Exhibit A. Cost shares will be recalculated based on updated information on population and area using the formulas in Exhibit B for fiscal year 1992/93 and at appropriate future intervals as specified in the bylaws. The budget allocation for the Individual Programs shall be made directly by the individual responsible parties.

6. This Agreement shall have a term of six (6) years from the first day of April 1991, subject to automatic renewal for a five (5) year period in the absence of objection thereto made in writing by any Party 90 days in advance of the renewal date. This Agreement shall have an additional term of six (6) years from the first day of April 2002, subject to an additional automatic renewal for a five (5) year period in the absence of objection thereto made in writing by any Party 180 days in advance of the renewal date. The participation of any Party to this Agreement may be terminated by a two-thirds affirmative vote of all allocated votes in any year in which the funds necessary for its continued involvement are not appropriated by its legislative body.

7. The PARTIES shall retain the ability to individually (or collectively) request permit modifications and initiate permit appeals for permit provisions to the extent that a provision affects an individual party or group of PARTIES.

8. This agreement may be amended from time to time by written agreement of the Parties' governing bodies representing two-thirds or more of all allocated votes as shown in Exhibit A.

9. Participation in this Agreement may be terminated by any Party for any reason after the Party complies with all of the conditions of termination. The conditions of termination include the following: the Party shall notify all of the other Parties to the Agreement 90 days prior to its termination in the Agreement, the Party shall obtain its own NPDES permit for urban runoff, and the Party shall have its name deleted as a co-permittee of the Parties' NPDES permit. Any expenses associated with terminating the Agreement including but not limited to filing for and obtaining the individual NPDES permit and the amendment of the Parties' NPDES permit will be solely the responsibility of the Party terminating its participation in the Agreement.

10. It is understood and agreed that, pursuant to Government Code 895.4, each Party ("indemnitor") shall, to the extent permitted by law, defend, indemnify and save harmless each other Party, and its officers and employees from all claims, suits or actions of every name, kind and description resulting from indemnitor's performance of this Agreement, excluding any injuries, death, damage or liability resulting from the negligence or willful misconduct of the other Parties or their officers or employees.

Appendix B: General Program Tasks and Budget for FY 2001/02

Program Component	**FY 2001/02 Budget**
Planning and Regulatory Compliance	$519,000

FY 2001/02 General Program Budget Summary

Watershed Assessment	$151,000
Monitoring and Special Studies	$448,000
Public Information/Participation	$555,000
Municipal Maintenance Activities	$88,000
New Development and Construction Site Controls	$82,000
Illicit Discharge Controls	$46,000
Industrial and Commercial Discharge Controls	$124,000
Contingency	$87,000
BUDGET TOTAL	**$2,100,000**

Planning and Regulatory Compliance General Program Work Plan and Budget - FY 2001/02

Task Number and Description	Rationale/Background (if necessary)	Budget	Schedule/ Due Date
PRC-1. Participate in the Regulatory Process:		$99,000	
• Review and comment on legislation and regulation affecting stormwater management. Confer with Regional board on permit reissuance. (Includes all legal assistance to the Program.)	Previously funded under Task 2.3 (Respond to Regulatory Initiatives).	($59,000)	Ongoing
• Represent Program in TMDL and permit processes and on BASMAA and California Stormwater Quality Task Force.	Previously part of Task 2.2 (Lead and Represent).	($40,000)	Ongoing
PRC-2. Assist with Permit Compliance:		$87,000	Ongoing
• Develop deliverable forms. Compile and submit required reports to Regional Board.	Previously funded under Task 2.1 (Assist with Compliance).	($52,000)	
• Review member agencies' performance and provide additional assistance with permit compliance.	Previously funded under Task 2.4 (Continuous Improvement).	($35,000)	
PRC 3 & 4. Develop Partnerships and Facilitate Watershed Approach:		$40,000	Ongoing
• The purpose of this task is to expand upon existing partnerships and to pursue opportunities to create additional partnerships.	Previously part of Task 2.2 (Lead and Represent).	($15,000)	
• The purpose of this task is to coordinate the Program's involvement in watershed management activities.	Funding transferred from Watershed Assessment component.	($25,000)	
PRC 5. Control Measure Plans:		$50,000	Ongoing
• Implement the planning component tasks of the Control Measure Plans and coordinate the implementation and updating of Control Measure Plans	$22,000 from Task 2.2 (Lead and Represent); $28,000 in additional funding.		
PRC 6. Planning and Evaluation:		$57,000	Ongoing
• Program planning, coordination and evaluation.	Previously funded under Task 2.5.1.	($20,000)	
• Newsletter and website.	Previously funded under Task 2.6 (Website and Newsletter).	($37,000)	
PRC 7. Management Services		$101,000	Ongoing
• Program management, budgeting, contracting, accounting, and reporting.	Previously funded under Task 2.5.2 (Management Services	($61,000)	
• Facilitate Management and Policy Level Subcommittee meetings and project management.	Previously funded under Task 2.5.1	(40,000)	
PRC 8. Fees and Dues:		$85,000	

Planning and Regulatory Compliance General Program Work Plan and Budget - FY 2001/02

Task Number and Description	Rationale/Background (if necessary)	Budget	Schedule/ Due Date
• Annual NPDES Permit Fee. • BASMAA and California SWQTF contributions		($10,000) ($75,000)	
Total Budget		$519,000	

Watershed Assessment General Program Work Plan and Budget - FY 2001/02

Task Number and Description	Rationale/Background (if necessary)	Budget	Schedule/ Due Date
WA-1. Develop and maintain a GIS resource for watershed information: • Continue mapping of pilot watersheds, and fill high-priority data needs such as digital conversion of available data or maps. Priorities and map projects to be developed in consultation with the local co-permittees or other watershed partners, and in coordination with other regional efforts. • Develop framework for long-term inventory of other Alameda County watersheds. Identify needs and priorities for incorporating data.	These tasks are all based on the Draft SWQMP, and support Objective #1 of the BASMAA Regional Monitoring Strategy.	$55,000 ($45,000) ($10,000)	Ongoing Target completion January 2002
WA-2. Use a variety of indicators to assess the condition of streams and watersheds: • Coordinate development of creek indicators (macroinvertebrate community, flow or imperviousness) with the proposed Stream Protection Policy and other regional initiatives. • Provide resources and training to citizen monitoring groups that are working with local watershed partners. May use services for training and technical assistance provided by Watershed Assessment Resource Center or other regional information sources.		$30,000 ($15,000) ($15,000)	Ongoing
WA-3. Provide useful watershed information to the Program and other watershed stakeholders: • Continue testing and application of selected indicators for contact recreation and human health risk (e.g. microbiological, chemical); provide tools and guidance to co-permittees and other local managers. • Conduct local pilot projects or assist member agencies in conducting watershed inventory and planning. • Prepare watershed maps and other creek information for display on ACCWP website.		$56,000 ($16,000) ($30,000) ($10,000)	Ongoing
WA-4. Reporting and component management: • Develop budgets, manage projects, compile reports, and evaluate component activities.		$10,000	Ongoing
Total Budget		$151,000	

Monitoring and Special Studies General Program Work Plan and Budget - FY 2001/02

Task Number and Description	Rationale/Background (if necessary)	Budget	Schedule/ Due Date
MS-1. Characterize and track pollutants of concern in urban runoff:	These tasks are based on the Draft SWQMP, and support Objective #2 of the BASMAA Regional Monitoring Strategy.	$267,000	Ongoing
• Required contribution to Regional Monitoring Program for Trace Substances.	An anticipated increase in the annual RMP fee has been estimated at 10% for calendar year 2002.	($147,000)	
• Continue sediment sampling for Mercury, PCB and organochlorine pesticides, and investigate potential sources in high priority watersheds as requested by Regional Board staff to support TMDL development.	One-time allocation for review of past data and preparation of long-term plan, to be updated after several years of sampling.	($50,000)	
• Review past Program fixed-station sampling data and develop statistically sound design for long-term monitoring plan to track metals, pesticides and toxicity.		($30,000)	
• Conduct stormwater monitoring in accordance with long-term plan.		($15,000)	
• Refine database of past sampling data; incorporate additional data types and develop queries or other user interfaces to facilitate analysis of long-term trends.		($25,000)	
MS-2. Evaluate the effectiveness of urban runoff BMPs:	These tasks are based on the Draft SWQMP, and support Objective #3 of the BASMAA Regional Monitoring Strategy.	$75,000	Ongoing
• Conduct special studies focusing on TMDL priority pollutants and their sources. These studies may include: planning of data collection for future TMDLs; local source identification; identification or refinement of specific control measures.		($35,000)	
• Conduct studies to assist establishment of local design standards for treatment and retention of runoff from new developments and redevelopment areas, similar to the SUSWMP requirements being discussed in relation to Santa Clara's NPDES permit renewal.	ACCWP's next NPDES permit is likely to include similar requirements, pursuant to recent "Bellflower" decision.	($40,000)	
MS-3. Provide technical information on management issues involving urban runoff:	These tasks support stormwater management and pollution prevention by co-permittees	$37,000	Ongoing
• Conduct special studies to address data gaps or management issues concerning pollutants of concern and urban runoff impacts.		($27,000)	
• Provide miscellaneous technical on-call support as needed.		($10,000)	

Monitoring and Special Studies General Program Work Plan and Budget - FY 2001/02

Task Number and Description	Rationale/Background (if necessary)	Budget	Schedule/ Due Date
MS-4. Coordinate with RMP and BASMAA: • Participate in BASMAA Monitoring Committee, RMP technical review, other regional stakeholder discussions.		$24,000	Ongoing
MS-5. Reporting and component management: • Facilitate and support Watershed Assessment and Monitoring Subcommittee. • Develop component budgets, track expenditures, conduct special studies needs assessment, evaluate component activities and manage component tasks.		$45,000 ($20,000) ($25,000)	Ongoing
Total Budget		$448,000	

Public Information/Participation General Program Work Plan and Budget - FY 2001/02

Task Number and Description	Rationale/Background (if necessary)	Budget	Schedule/ Due Date
PI/P 1. Implement targeted outreach:		$205,000	Ongoing
• Targeted campaigns will focus on helping to implement the control measure plans for specific water quality impairing pollutants. The pollutants that appear to be priorities on the Regional Board's list include mercury, PCBs and dioxin compounds, and pesticides. The campaigns will focus primarily on targeting residential usage and encouraging residents to prevent pollution.	Regional Advertising Campaign	($100,000)	
	Local Placement of Advertising	($95,000)	
	Collaboration with BASMAA and others	($10,000)	
PI/P 2. Continue to reinforce storm water messages:		$41,000	Ongoing
• This task supports reinforcing general and specific storm water messages.	IPM partnership	($21,000)	
	Media Relations	($10,000)	
	Outreach Events	($10,000)	
PI/P 3. Support educational and watershed-based approaches:		$170,000	Ongoing
• This task will provide support for programs that educate students about stormwater pollution (for example, Bay Savers, Kids in Creeks, or Estuary Action Challenge), the Community Stewardship Grants program, and outreach events such as the *Watershed Symposium.*	Bay Savers	($56,000)	
	Aquatic Outreach Institute	($70,000)	
	Estuary Action	($15,000)	
	Community Stewardship	($17,500)	
	Symposium	($10,000)	
	BAEER Fair	($2,500)	
PI/P 4. Support municipalities:		$74,000	Ongoing
• This task includes: developing and obtaining promotional materials for use by the municipalities; updating, reprinting, and distributing existing ACCWP materials; and, responding to requests for information from the public and member agencies.	Materials	($50,000)	
	Support	($24,000)	
PI/P 5. Component management and evaluation:		$67,000	Ongoing
• This task includes: subcommittee support, component evaluation, task management, and the development of work plans and budgets.	Subcommittee Support $20,000	($20,000)	
	Component Evaluation $7,000	($7,000)	
	Component Management $40,000	($40,000)	
Total Budget		$555,000	

Municipal Maintenance Activities General Program Work Plan and Budget - FY 2001/02

Task Number and Description	Rationale/Background (if necessary)	Budget	Schedule/ Due Date
MN-1. Implement and Assist with Performance Standards: • Each agency will implement the performance standards for municipal maintenance activities. The performance standards include the following major activities: – Street Sweeping – Storm Drain Cleaning – Conducting Training – Reporting The General Program will work through the Maintenance Subcommittee to resolve implementation and consistency issues.	Performance standards are the primary method for implementing the SWMP and complying with requirements of the NPDES permit.	$15,000	Ongoing
MN-2. Coordinating Maintenance-Related Activities with Other Subcommittees of the ACCWP, Other Agencies and Private Industries: • The subcommittee will work with appropriate staff from other Subcommittees of the ACCWP, park and recreation departments, and other public agencies and private industries whose activities are similar to or potentially affect municipal maintenance activities to identify activities of concern. Examples of other public agencies and private industries include PG&E, water suppliers and utilities, garbage collection companies, the Port of Oakland, golf courses, private recreational facilities and animal confinement areas. private recreational facilities and construction contractors.	Coordination among agencies and industries whose activities affect municipal maintenance will result in greater efficiency and effectiveness in meeting this component's goals.	$15,000	Ongoing
MN-3. Optimize Data Management and Analysis: • The General Program will optimize ongoing collection, recording and analysis of maintenance data. This will include continuing to evaluate if the types of maintenance data being collected are useful and if other types of data should be collected. Examples of potential studies and data analysis include the following: – Leaf collection programs – Litter abatement programs.	This task is based on the SWMP.	$15,000	Ongoing
MN-4. Outreach and Training: • The General Program will facilitate outreach and training activities aimed at preventing discharges from maintenance activities, with direction from the Maintenance Subcommittee. This includes selecting the appropriate forum (e.g., workshops, round table meetings, work groups, inter/intra-agency coordination meetings, etc.) depending on the target audiences (e.g., ACCWP agencies, other agencies, property owners, residence, etc.). • The Maintenance Subcommittee will also coordinate outreach activities with	Outreach activities will educate maintenance staff and the public about the ACCWP's goals related to municipal maintenance and provide information on how the public can help the municipalities achieve these goals.	$33,000	Ongoing

Municipal Maintenance Activities General Program Work Plan and Budget - FY 2001/02

Task Number and Description	Rationale/Background (if necessary)	Budget	Schedule/ Due Date
other ACCWP Subcommittees when the objectives of a planned outreach and training activity conducted by the Maintenance Subcommittee overlap with the objectives of another Subcommittee.			
MN-5. Manage Component and Evaluate and Improve Its Effectiveness: • The General Program will assist the Maintenance Subcommittee and its workgroups to conduct meetings and prepare any needed NPDES permit reports and work plans related to this component. This includes assisting with the development of annual General Program budgets. The following activities are examples of how the effectiveness of this component may be evaluated: – Survey member public agencies to obtain information about how well this component and the performance standards are working. – Evaluate the information being submitted as part of the annual reports. – Evaluate the Regional Board staff's reviews of the Clean Water Program's performance in this area.	This task is based on the SWMP.	$10,000	Ongoing
Total Budget		$88,000	

New Development and Construction Site Controls General Program Work Plan and Budget - FY 2001/02

Task Number and Description	Rational/Background (if necessary)	Budget	Schedule/ Due Date
ND-1. Identify More Specific Stormwater Controls for New Development: • Identify and work with a stakeholder group to develop a method for integrating pollutant and hydromodification controls. Submit method to Regional Board staff and make changes based on their feedback. • Identify assistance needed by ACCWP agencies to implement these controls.	This task is based on the SWMP and Regional Board interest in more directly specifying how treatment, hydromodification, source and design controls, will be used.	$18,000	06-30-2002 Ongoing
ND-2. Assist with Implementation of More Specific Stormwater Controls: • Perform activities identified by New Development Subcommittee as helpful to implementation of the new, more specific controls such as: incorporate the controls into performance standards; develop revised Conditions of Approval and other planning materials; provide information on successful development/redevelopment projects employing the controls and information on cost-effective ways to implement the controls; and assist with implementation of any new development control measures related to a specific pollutant.	This task is based on the SWMP and municipal planning staff's need to implement treatment, hydromodification, source and design controls.	$18,000	Ongoing
ND-3. Assist Development and Facilitate Use of Watershed Information: • Identify watershed information needs related to New Development. Communicate these needs to the Watershed Monitoring and Management Subcommittee. • Facilitate municipal planning and engineering staff's use of this information as it becomes available.	This task is based on the SWMP and the ACCWP's emphasis on watershed management.	$3,000 ($1,000) ($2,000)	Ongoing
ND-4. Promote Outreach and Training: • Conduct one outreach and/or training event to a target group (agency staff or building industry) chosen by the New Development Subcommittee. • Develop and distribute outreach materials with direction from New Development Subcommittee. Compile and distribute guidance and educational material to agency staff.	This task is based on the SWMP. The focus of training and outreach materials will be on the specific pollutant and hydromodification controls developed in Task 7.1.	$18,000 ($10,000) ($8,000)	06-30-2002

New Development and Construction Site Controls General Program Work Plan and Budget - FY 2001/02

Task Number and Description	Rational/Background (if necessary)	Budget	Schedule/ Due Date
ND-5. Assist with NPDES Permit Requirements, Reports, and Budgets: • Provide support for monthly New Development Subcommittee meetings and any needed work group meetings. Prepare reports, budgets, and other items to assist with implementation and documentation of this component. Evaluate effectiveness of this component so that the New Development Subcommittee can make improvements to the General Program.	This task is based on the SWMP and the ACCWP desire to implement a process of continuous improvement.	$25,000	Ongoing
Total Budget		$82,000	

Illicit Discharge Controls General Program Work Plan and Budget - FY 2001/02

Task Number and Description	Rational/Background (if necessary)	Budget	Schedule/ Due Date
ID-1. Implement and Assist with Performance Standards: • Provide input and direction on the next Stormwater Management Plan and permit application based on comments from the I&IDC Subcommittee.[1] Review component performance standards and update as needed.	This task is based on the SWMP. Performance standards are reviewed annually, and updated as necessary.	$1,000	Ongoing 01-01-2002
ID-2. Assist Member Agencies Comply with Requirements for Conditionally Exempt Non-Stormwater Discharges: • Facilitate compliance with conditionally exempt non-stormwater discharges. Work with the I&IDC Subcommittee to identify effective control measures. Facilitate process for adding new conditionally exempt non-stormwater discharges and developing appropriate BMPs.	This task is based on the SWMP, the municipal stormwater NPDES permit, and "Table 5. Summary of Conditionally Exempt Discharges, Follow-up, and Schedule" of the ACCWP *1997/98 Annual Report*.	$7,000	09-15-2002
ID-3. Track and Analyze Non-Stormwater Discharge Reports: • Collect and analyze information on illicit discharge control activities reported in the ACCWP agencies' quarterly summary reports. Analyze information to detect trends and to improve planning and management of illicit discharge control program activities, with direction from the I&IDC Subcommittee.	This task is based on the SWMP and the municipal stormwater NPDES permit.	$20,000	03-15-2002 & 09-15-2002
ID-4. Conduct Outreach and Training: • Facilitate outreach and training activities to prevent illicit discharges, with direction from the I&IDC Subcommittee. Develop materials to support outreach and training activities. • Identify a target audience and select appropriate outreach activity at least once every two years.	This task is based on the SWMP.	$12,000 ($2000) ($10,000)	07-01-2002
ID-5. Manage Component and Evaluate and Improve Its Effectiveness: • Assist I&IDC Subcommittee and its workgroups to conduct meetings and prepare NPDES permit reports, work plans and associated budgets related to this component.	This task is based on the SWMP. All agencies will submit their action plan using the same form to help ensure the information reported is consistent countywide.	$6,000	12-15-2001 03-15-2002 & 09-15-2002
Total Budget		$46,000	

[1] The majority of the budget for I&IDC Subcommittee coordination of illicit discharge control consistency issues is included in Task 9.2.

Industrial and Commercial Discharge Controls General Program Work Plan and Budget - FY 2001/02

Task Number and Description	Rational/Background (if necessary)	Budget	Schedule/ Due Date
ICD-1. Assist with the Implementation of Business Inspections, Enforcement and Educational Outreach Activities: • Assist Agencies to implement business inspections and related performance standards and encourage Program-wide consistency under the auspices of the Industrial/Commercial & Illicit Discharge Control (I&IDC) Subcommittee and its work groups. • Review performance standards and make improvements on a biannual or more frequent basis.	This task is based on SWMP. *Illicit Discharge Control Program coordination is incorporated into this budget*.	$45,000	Ongoing 06-30-2003
ICD-2. Develop BMP Guidance Materials: • Identify target audiences and which format to use for materials under the direction of the Industrial/Commercial & Illicit Discharge Control Subcommittee. Produce materials.	This task is based on SWMP. Guidance materials will support both illicit discharge control and industrial/commercial discharge control activities.	18,000	Ongoing
ICD-3. Track and Analyze Facility Inspection Reports: • Collect and analyze facility inspection report forms. Discuss findings with and perform additional analysis at the request of the Industrial/Commercial & Illicit Discharge Control Subcommittee.	This task is based on SWMP.	$20,000	Ongoing
ICD-4. Conduct Outreach and Training: • Identify a target audience (agency, business groups or industrial/ commercial associations), select appropriate forum for outreach under the direction of the Industrial/Commercial & Illicit Discharge Control Subcommittee. Conduct outreach or training activity(s) on a biannual or more frequent basis. When common objectives exist, coordinate training or outreach events with other General Program subcommittees.	This task is based on the SWMP.	$15,000	06-30-2003
ICD-5. Assist with NPDES Permit Requirements, Reports, Budgets and Evaluation of Industrial Discharge Control Activities: • Support the meetings of the Industrial/Commercial & Illicit Discharge Control Subcommittee and work groups. Prepare reports, budgets and other items necessary for administering this component and ensuring NPDES Permit compliance. Evaluate effectiveness of component through business surveys, analysis of agency annual report submittals and Regional Board staff's reviews. Based on evaluation, suggest policy and procedure improvements.	This task is based on the SWMP.	26,000	Ongoing
Total Budget		$124,000	

Appendix C: Pollutant Reduction Plans

Table C1- Diazinon Pollutant Reduction Plan: FYs 2001/02 and 2002/03

These plans will be replaced by new plans when available according to the reissued NPDES permit's requirements

Area of Activity	Specific Tasks	Schedule	Conducted by:
Municipal Activities			
MA-1: Survey agency use of insecticides	1) Conduct survey of insecticide use by municipal employees or contractors. 2) Assess results of survey and develop a plan to minimize the potential for municipal use of insecticides to impact storm water quality. 3) Begin implementation of recommended activities	1) FY 01/02 2) FY 01/02 3) FY 01/02	1) Municipalities/ Program 2) Municipalities/ Program 3) Municipalities
MA-2: Train municipal employees who use insecticides about insecticide-related surface water toxicity, proper use and disposal of insecticides, and less-toxic methods of prevention and control.	1) Conduct survey of established training requirements for municipal employees who use insecticides. Report on results. 2) Assess results of survey and develop a plan to augment existing training activities. 3) Implement training activities	1) FY 01/02 2) FY 01/02 3) FY 01/02	1) Municipalities/ Program 2) Planning Comp. 3) Municipalities/ Planning Comp.
MA-3: Integrated Pest Management (IPM) practices, policies, or ordinances.	1) Review established IPM practices, policies, or ordinances. Determine if additional practices, policies or ordinances should be developed. Submit written report on findings and recommended actions to Regional Board. 2) Compile examples of IPM practices, policies, and ordinances and provide to member agencies. Assist member agencies with implementation as appropriate. 3) Implement recommendations from Task 1.	1) FY 01/02 2) FY 01/02 3) FY 01/02	1) Municipalities/ Program 2) Planning Comp. 3) Municipalities

Table C1- Diazinon Pollutant Reduction Plan: FYs 2001/02 and 2002/03

These plans will be replaced by new plans when available according to the reissued NPDES permit's requirements

Area of Activity	Specific Tasks	Schedule	Conducted by:
Outreach			
OR-1 Outreach to Residents: Continue to develop and distribute information to the general public on pesticide-related toxicity, proper use and disposal of pesticides, and less-toxic methods of pest prevention and pest control.	1) Support "Our Water, Our World" point of purchase campaign. 2) Develop distribution plan for insecticide related outreach materials. 3) Implement distribution plan	1) FY 01/02 2) FY 01/02 3) FY 01/02	1) PI/P Comp. 2) Municipalities and PI/P Comp. 3) Municipalities and PI/P Comp.
OR-2 Outreach to Commercial Facilities: Provide information to selected businesses (e.g., restaurants, and supermarkets) about insecticide-related surface water toxicity, proper use and disposal of insecticides, and less-toxic methods of prevention and control.	1) Select business sector and develop or adopt outreach material 2) Distribute Material in conjunction with Industrial/Commercial Inspection Program	1) FY 01/02 2) FY 02/03	1) II&ID Comp. / Planning Comp. 2) Municipalities
Develop Partnerships			
DP-1 PCOs: The Program will contact licensed applicators in the county, and will work with those who are willing, to set up a program to minimize water quality impacts from structural pest control applications.	1) Contact licensed applicators and coordinate development of IPM approach 2) Begin implementation of IPM approach	1) FY 01/02 2) FY 02/03	1) Planning Comp. 2) Planning Comp.
DP-2 HHW facilities: Continue to support and promote household hazardous waste collection as an important insecticide disposal option for residents.	1) HHW info on P^2 Outreach material. 2) Conduct meeting(s) with HHW staff to discuss additional opportunities for coordination. 3) Begin Implementation of activities developed in Task 2.	1) Ongoing 2) FY 01/02 3) FY 01/02	1) PI/P Comp. 2) Planning Comp. 3) Program or municipalities as appropriate
DP-3 Agricultural Commission:	1) Conduct meeting(s) with County Agriculture staff to coordinate development of outreach for PCOs.	1) FY 01/02	1) Planning Comp.

Table C1- Diazinon Pollutant Reduction Plan: FYs 2001/02 and 2002/03

These plans will be replaced by new plans when available according to the reissued NPDES permit's requirements

Area of Activity	Specific Tasks	Schedule	Conducted By
Monitoring			
M-1: Use monitoring and science to investigate local impacts and sources.	1) Develop insecticide application/runoff model. 2) Track long term trends in storm water toxicity and insecticide concentrations (will be included in long-term monitoring plan)	1) FY 01/02 2) Ongoing	1) Monitoring Comp. 2) Monitoring Comp.
Regulatory			
R-1: Participate in the pesticide regulatory processes as appropriate.	1) Provide written comments to Regional Board, U.S. EPA and California Department of Pesticide Regulation as appropriate. 2) Provide monitoring data to Regional Board, U.S. EPA and California Department of Pesticide Regulation as appropriate.	1) Ongoing 2) Ongoing	1) Planning Comp. 2) Monitoring Comp.
Coordination			
C-1: Coordinate implementation of the PRP.	1) Establish work group to coordinate implementation across components, develop reporting forms and assist municipalities. 2) Coordinate with BASMAA, the California Storm Water Quality Task Force and the Urban Pesticide Committee as appropriate.	1) Ongoing 2) Ongoing	1) Planning Comp. 2) Planning Comp.
Evaluation			
V-1: Evaluate implementation of the PRP	1) Review each of the action items and develop and conduct evaluations as appropriate. 2) Report on the results of the evaluations to the Regional Board	1. Annually 2. Annually	1. Planning Comp. 2. Planning Comp.

Table C2- Mercury Pollutant Reduction Plan: FYs 2001/2, 2002/3 and 2003/4

These plans will be replaced by new plans when available according to the reissued NPDES permit's requirements

Area of Activity	Specific Tasks	Schedule	Conducted by:
Municipal Activities			
MA1 Fluorescent Bulb Recycling	1) Conduct survey of fluorescent bulb recycling practices currently employed by municipalities. 2) Assess potential for improvement in recycling practices. 3) Implement improved practices	1) FY 02/03 2) FY 02/03 3) FY 03/04	1) Municipalities 2) Municipalities 3) Municipalities
MA2- Mercury Reduction Policies/Ordinances	1) Assess feasibility of implementing purchasing policies to reduce the use of mercury containing products. 2) Implement activities from assessment as appropriate.	1) FY 02/03 . 2) FY 03/04	1) Municipalities 2) Municipalities
Outreach			
OR1- Outreach to Businesses: Work with business community to increase level of fluorescent lamp recycling.	1) Identify obstacles to increased fluorescent lamp recycling. 2) Work with appropriate entities to try to minimize obstacles.	1) FY 02/03 2) FY 02/03	1) Planning Comp. 2) Planning Comp.
OR2- Outreach to Residents: Develop and distribute information to the general public on mercury related hazards, proper use and disposal of mercury containing products, and mercury free alternatives.	1) Develop mercury related outreach program 2) Conduct public outreach	1) FY 02/03 2) FY 03/04	1) PI/P Comp. 2) PI/P Comp. and/or Municipalities
Partner with Other Agencies			
P1- Household Hazardous Waste: Continue to support and promote household hazardous waste collection as a mercury disposal option for residents.	1) HHW info on P^2 Outreach material. 2) Conduct meeting(s) with HHW staff to discuss opportunities for coordination. 3) Begin implementation of activities developed in Task 2.	1) Ongoing 2) FY 01/02 3) FY 02/03	1) PI/P Comp. 2) Planning Comp. 3) Program or municipalities as appropriate

Table C2- Mercury Pollutant Reduction Plan: FYs 2001/2, 2002/3 and 2003/4

These plans will be replaced by new plans when available according to the reissued NPDES permit's requirements

Area of Activity	Specific Tasks	Schedule	Conducted by:
P2- Green Business Program:	1) Evaluate funding Green Business Program 2) Assess potential for improving Green Business Program's fluorescent bulb recycling component 3) Promote Program's and municipalities' use of Green Businesses 4) Promote public's use of Green Businesses	1) FY 01/02 & 02/03 2) FY 01/02 3) Starting 02/03 4) Starting 02/03	1) II&ID Comp. 2) II&ID Comp. 3) Planning Comp. and Municipalities 4) PI/P
Regulatory Involvement			
R1: Participate in the mercury TMDL process.	1) Attend mercury TMDL meetings as appropriate. 2) Provide written comments to U.S. EPA and the Regional Board as appropriate. 3) Support legislation to reduce mercury use.	1) Ongoing 2) Ongoing 3) Ongoing	1) Planning Comp. 2) Planning Comp 3) Planning Comp
R2: Fluorescent Bulb Recycling	1) Encourage the Department of Toxic Substances Control to promote recycling of fluorescent bulbs through revisions to Universal Waste Rule.	1) Ongoing	1) Planning Comp.
Monitoring			
M1: Use monitoring and science to investigate local impacts and sources.	1) Conduct survey of stream sediments to assess concentrations and loading of mercury. 2) Conduct additional surveys or special studies as appropriate.	1) FY 01/02 2) As appropriate	1) Monitoring Comp. 2) Monitoring Comp.
Coordination and Evaluation			
CE1: Coordinate implementation of the mercury PRP.	1) Coordinate implementation across components. 2) Coordinate with BASMAA, the Regional Board, and U.S. EPA as appropriate.	1) Ongoing	1) Planning Comp.
CE2: Evaluate implementation of the mercury PRP	1) Review each of the action items and develop and conduct evaluations as appropriate. 2) Report on the results of the evaluations to the Regional Board	1) Annually 2) Annually	1) Planning Comp. 2) Planning Comp.

Table C3- Copper Pollutant Reduction Plan: FYs 2001/2 and 2002/3

These plans will be replaced by new plans when available according to the reissued NPDES permit's requirements

Area of Activity	Specific Tasks	Schedule	Conducted by:
Brake Pad Partnership			
B-1: Brake Pad Partnership	1) Contribute funds to support Brake Pad Partnership effort.	1) FY 01/02 & 02/03	1) Planning Comp.
Municipal Activities			
MA1: Architectural uses of copper	1) Assess feasibility and effectiveness of reducing the use of copper in roofs or gutters. 2) Implement actions based on results of assessment.	1) FY 01/02 2) FY 02/03	1) New Development and Monitoring Comp. 2) Municipalities
MA2: Street Sweeping	1) Continue street sweeping in accordance with Municipal Maintenance Performance Standard.	1) Ongoing	1) Municipalities.
MA3- Outreach to Businesses: Conduct outreach to selected business sector (e.g., metal finishers, pool maintenance, auto repair) regarding BMPs to reduce copper discharge.	1) Select Business Sector and Develop Outreach 2) Distribute material in conjunction with Industrial/Commercial inspection program	1) FY 02/03 2) FY 03/04	1) II&ID Comp. 2) Municipalities
Monitoring			
M-1: Use monitoring and science to investigate local impacts and sources.	1) Track long term trends for copper concentrations in storm water. (Will be included in long-term monitoring plan.) 2) Conduct special studies as appropriate	1) Ongoing 2) As appropriate	1) Monitoring Comp. 2) Monitoring Comp.
Coordination			
C-1: Coordinate implementation of the CMP.	1) Coordinate implementation across components. 2) Coordinate with BASMAA, the Brake Pad Partnership, and others as appropriate.	1) Ongoing 2) Ongoing	1) Planning Comp. 2) Planning Comp.
Evaluation			
V-1: Evaluate implementation of the CMP	1) review each of the action items and develop and conduct evaluations as appropriate. 2) report on the results of the evaluations to the Regional Board	1) Annually 2) Annually	1) Planning Comp. 2) Planing Comp.

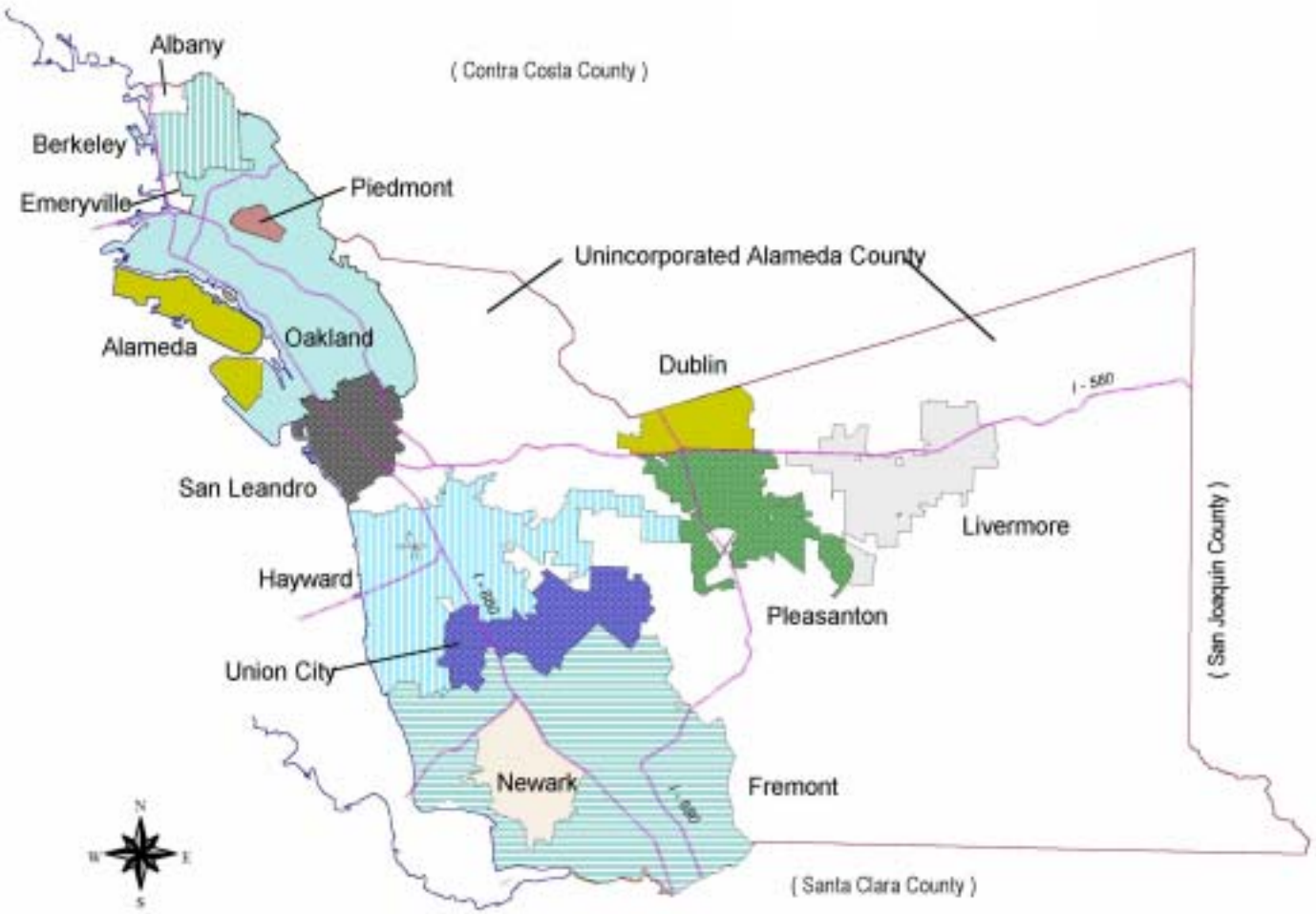
Table C4- PCBs Pollutant Reduction Plan: FYs 2001/02 and 2002/03

These plans will be replaced by new plans when available according to the reissued NPDES permit's requirements

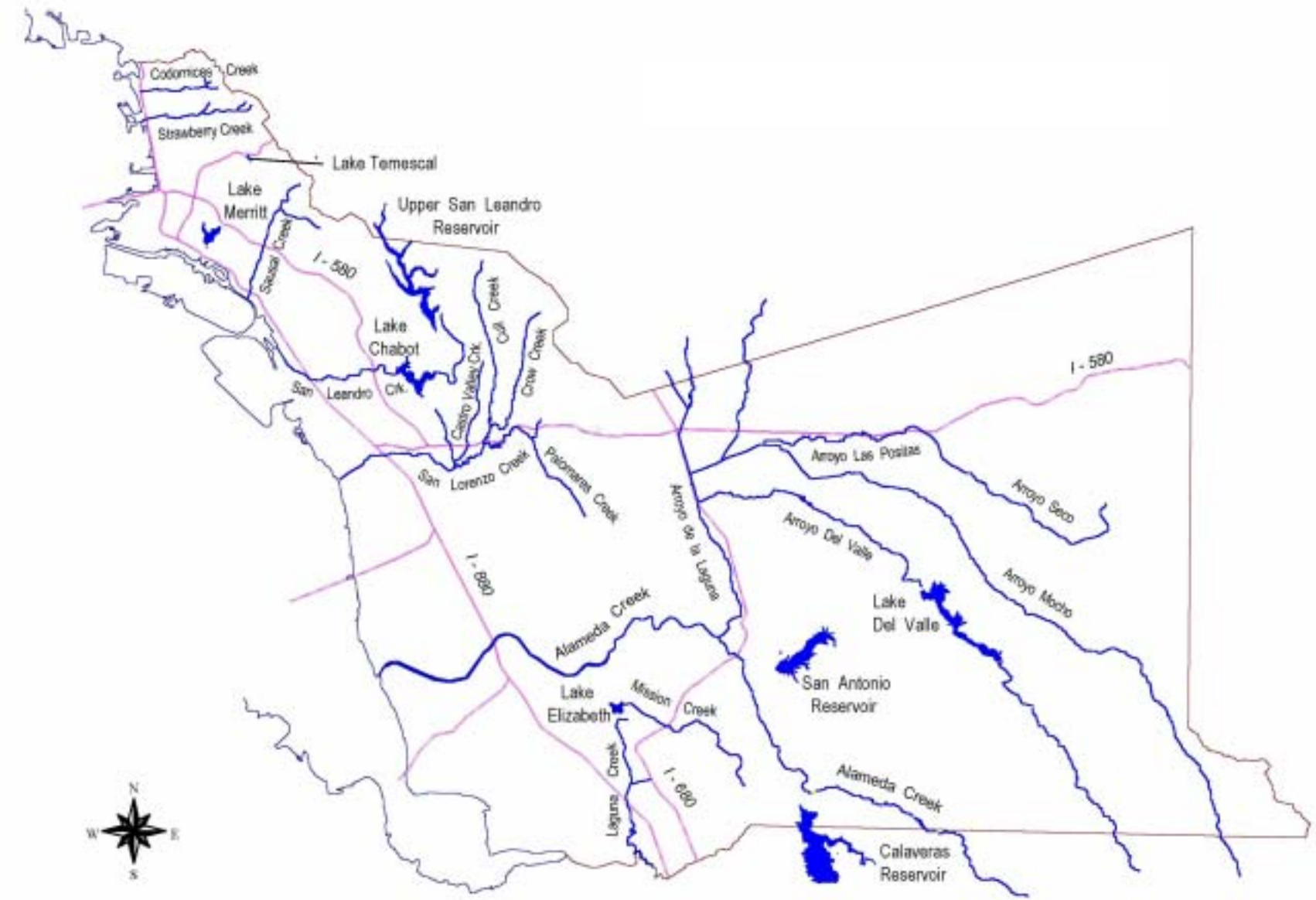
Area of Activity	Specific Tasks	Schedule	Conducted by:
Monitoring			
M-1: Use monitoring and science to further investigate local impacts and sources.	1) Conduct survey of stream sediments to assess concentrations and loadings of PCBs. 2) Conduct follow-up activities to track sources of PCBs 3) Assess potential for ongoing discharges of PCBs from industrial facilities or other sources. 4) Develop a plan to reduce discharges of PCBs in runoff from the county.	1) FY 01/02 2) FY 01/02 3) FY 01/02 4) FY 02/03	1) Monitoring Comp. 2) Monitoring Comp. 3) Monitoring Comp. 4) Monitoring Comp.
Regulatory			
R-1: Participate in the PCB TMDL process as appropriate.	1) Provide written comments on draft documents the Regional Board as appropriate. 2) Provide monitoring data to the Regional Board as appropriate.	1) Ongoing 2) Ongoing	1) Planning Comp. 2) Monitoring Comp.
Evaluation			
V-1: Evaluate implementation of the PRP	1) reviewing each of the action items and develop and conduct evaluations as appropriate. 2) report on the results of the evaluations to the Regional Board	1) Annually 2) Annually	1) Planning Comp. 2) Planing Comp.

Appendix D: Figures

Alameda County Municipalities
Figure D-1



Major Open Creeks and Waterbodies in Alameda County
Figure D-2



Boundaries of Alameda County Watershed
Figure D-3